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SOCIOLOGICAL DISCOVERIES.

The amount of misinformation which finds its way into the average discussion of all sociological questions, and which is now especially noticeable in everything bearing on immigration, is somewhat amazing. For instance, Mr. Broughton Brandenburg, president of the National Institute of Immigration, which we imagine is an institution of non-immigration, in an article in the *Saturday Evening Post* manages to convey about the usual average amount of misinformation. In this article he says:

Had there been no immigration to supply the labor the 2,000,000 American laborers now barely eking out a living in the rural districts of the East would have partially satisfied the demand, and the lack of full satisfaction would have raised the price of wages to its normal percentage above the cost of living.

If there is one thing more pronounced than another in the labor situation today, it is the scarcity of laborers and the high prices which must of necessity be paid. The MANUFACTURERS' RECORD fully believes in fair prices for labor, but, notwithstanding this, everyone is of necessity compelled to recognize that the tendency is to too great an advance in labor—an advance so great, in fact, that it may "kill the goose that lays the golden egg" by making the cost of building and of manufacturing so expensive as to bring about a reaction. If there are "2,000,000 American laborers now barely eking out a living" anywhere in America, for pity sake let the people of this country know where they are. With manufacturers and contractors begging for laborers and paying high prices to secure even inefficient

labor, especially where unskilled work is required, the discovery of a supply of 2,000,000 laborers ready for work would be a great blessing.

And then Mr. Broughton gives us the following astonishing piece of information:

At Anniston, Ala., the proprietors of the mills determined to replace their negro labor with imported white labor, and secured a batch. Through the first comers a steady stream has been induced, until at present Anniston is supplying other localities with cheap white labor.

The MANUFACTURERS' RECORD has been trying to keep in rather close touch with what is going on in the South. It knows that here and there a few batches of laborers have been taken South, but it had not before learned of Anniston's accomplishment. All honor to Anniston! We knew that it was a thrifty, energetic town; we knew that its people were wide-awake, always looking out for the main chance; we knew that every industry in the Anniston section is begging for laborers, and that the industrial development of all that territory is hampered by the lack of labor, but until Mr. Brandenburg so enlightened the world we did not know that Anniston is ready to supply "a stream of laborers" to the surrounding territory. Good for Anniston! The manufacturers, the iron and coal and lumber people and the farmers of that district will now be rushing to Anniston to get a glimpse of this "stream." Won't the Anniston people tell the world how they managed to do it and still keep it so quiet?

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 68, 69 and 70.

THE SOUTH'S MANUFACTURING PROGRESS.

Factories of the South are now producing goods to the value of about \$2,000,000,000 annually. Between 1900 and 1905 the capital invested in them increased from \$967,701,865 to \$1,597,513,217, or by \$629,811,352, an average of \$126,000,000 a year, and the value of their products increased from \$1,237,589,667 to \$1,787,776,794, or by \$550,187,127, an average of \$110,000,000 a year. Their capital increased 65 per cent. and the value of their products 44.4 per cent., while for the country at large the increases are estimated at a little more than 40 per cent. in capital and just about 30 per cent. in value of products. Bearing in mind that the 1905 figures, or, correctly, the figures as of the year ended December 31, 1904, deal with factories proper, and that they are compared with figures for factories proper in 1900, less, therefore, than the figures for manufacturing of the twelfth census, which included neighborhood industries and hand trades in the statistics, one may make comparison for five years of capital invested and of the value of products by

COMBINATIONS.

In view of recent decisions in anti-trust cases, it may be important for all farmers of the South and West who have united in any action to advance the price of cotton or grain to seriously ponder whether they have not laid themselves open to the danger of having committed a penitentiary offense. The same question may well be asked by all the trained nurses of the country, since we believe it is generally understood that all trained nurses are in a combination to prevent the acceptance of any price lower than the one generally agreed upon. Doctors, it is said, have in many places similar agreements regulating their fees, while it is known to everybody that labor men are very generally in combinations not only to regulate the rate of wages, but to prevent those who are not members of their unions getting employment. If the ice dealers of Toledo who united in a plan to advance or maintain prices on ice could be convicted and condemned to the penitentiary for a year, may it not be that if the same law be applied to farmers who have united to maintain prices of their products, to nurses, to physicians and to labor men who have united to advance or maintain their rate of remuneration, the number of people in our penitentiaries will be so great that those outside will have some difficulty in supporting them? In view of the Toledo decision, it would look as though this question may sooner or later be faced by all of these classes and by all others who have been in any sort of combination to regulate or maintain prices.

Commenting on this discussion the *New York Globe* says:

Since 1890, when the federal anti-trust law was passed, and soon thereafter in most of the State jurisdictions through the passage of anti-trust laws, it has been absolutely illegal for corporations and individuals in the same line of business to combine directly or indirectly to control prices or otherwise in restraint of trade. As often as these laws have been taken to the courts the principle on which they are based has been sustained. The law of the land forbids one groceryman to say to another, "Let's agree this morning to charge our customers 25 cents a dozen for eggs." It does not even permit a wink to be interchanged conveying the same meaning. Competitors must compete—this is the mandate of the statutes—or, stated negatively and more accurately, they do not permit them to agree not to compete, and this rule applies equally to groceryman, ice man, plumber, steelman, oil dealer and railroad man, and all other branches of business.

This may prove to be rather serious to the farmers of the South and West, who for years, by co-operative work, have sought to secure a fair price for their products. If this co-operation is no longer possible, and the wheat and the cotton grower are denied the right to unite for protection against those who would beat down the prices, a new phase will be put upon the agricultural interests of the whole country.

States in the following table compiled by the MANUFACTURERS' RECORD from figures of the Census Bureau:

| States | Capital Invested. | | Value of Products. | | Per cent. of Increase. | |
|--------------------|-------------------|-----------------|--------------------|-----------------|------------------------|--------------------|
| | 1900. | 1905. | 1900. | 1905. | Capital. | Value of Products. |
| Alabama..... | \$60,110,360 | \$105,382,859 | \$72,082,621 | \$109,169,922 | 75.3 | 51.4 |
| Arkansas..... | 24,275,158 | 46,306,116 | 28,481,678 | 53,564,394 | 90.8 | 49 |
| Dis. Columbia..... | 17,960,498 | 20,199,783 | 16,426,408 | 18,359,159 | 12.5 | 11.8 |
| Florida..... | 25,682,171 | 32,958,482 | 34,193,509 | 50,241,078 | 28.3 | 46.9 |
| Georgia..... | 79,303,316 | 135,211,551 | 94,532,368 | 151,040,455 | 70.5 | 59.8 |
| Kentucky..... | 87,995,822 | 147,282,478 | 126,508,660 | 159,753,968 | 67.4 | 26.3 |
| Louisiana..... | 100,874,729 | 150,810,608 | 111,397,919 | 186,379,592 | 49.5 | 67.3 |
| Maryland..... | 149,555,593 | 201,877,866 | 210,345,559 | 243,375,996 | 35 | 15.7 |
| Mississippi..... | 27,712,186 | 50,250,309 | 35,718,517 | 57,451,445 | 121.2 | 70.4 |
| N. Carolina..... | 68,283,005 | 141,000,639 | 85,274,083 | 145,529,776 | 106.5 | 67.1 |
| S. Carolina..... | 62,750,027 | 113,422,224 | 53,335,811 | 79,376,262 | 80.8 | 48.8 |
| Tennessee..... | 63,140,657 | 102,439,481 | 92,749,129 | 137,960,476 | 62.2 | 48.7 |
| Texas..... | 63,655,616 | 115,664,871 | 92,894,433 | 150,528,389 | 81.7 | 62 |
| Virginia..... | 92,298,589 | 147,989,182 | 108,644,150 | 148,556,535 | 60.3 | 37 |
| W. Virginia..... | 49,103,128 | 86,716,668 | 67,006,822 | 98,598,257 | 76.6 | 47.6 |
| Total..... | \$967,701,865 | \$1,597,513,217 | \$1,237,589,667 | \$1,787,776,794 | 65 | 44.4 |

Maryland, one of the oldest manufacturing States in the South, leads in the amount of actual capital invested and in the actual value of products of the factory system. But the glow of coming events in the industrial South appears in the facts that during the period under review Mississippi led both in the rate of increase in capital, 121.2 per cent., and in the rate of increase in the value of products, 70.4 per cent.; that North Carolina led in actual increase in capital, \$72,717,634, and that Louisiana led in the actual increase in the value of products, \$74,981,673.

In capital invested the increases by States, ranked according to the percentage of increase, were: Mississippi, from \$27,712,186 to \$50,250,309, or 27,538,123, equal to 121.2 per cent.; North Carolina, from \$68,283,005 to \$141,000,639, or \$72,717,634, equal to 106.5 per cent.; Arkansas, from \$24,275,158 to

\$1.7 per cent.; South Carolina, from \$62,750,027 to \$113,422,224, or \$50,672,197, equal to 80.8 per cent.; West Virginia, from \$49,103,128 to \$86,716,668, or \$37,613,530, equal to 76.6 per cent.; Alabama, from \$60,110,360 to \$105,382,859, or \$45,272,499, equal to 75.3 per cent.; Georgia, from \$79,303,316 to \$135,211,551, or \$55,908,235, equal to 70.5 per cent.; Kentucky, from \$87,995,822 to \$147,282,478, or \$59,286,656, equal to 67.4 per cent.; Tennessee, from \$63,140,657 to \$102,439,481, or \$39,298,824, equal to 62.2 per cent.; Virginia, from \$92,298,589 to \$147,989,182, or \$55,690,593, equal to 60.3 per cent.; Louisiana, from \$100,874,729 to \$150,810,608, or \$49,935,879, equal to 49.5 per cent.; Maryland, from \$149,555,593 to \$201,877,866, or \$52,322,273, equal to 35 per cent.; Florida, from \$25,682,171 to \$32,958,482, or \$7,276,311, equal to 28.3 per cent., and the District of Columbia,

from \$17,960,498 to \$20,199,783, or \$2,239,285, equal to 12.5 per cent.

In value of products the increases by States, ranked according to percentage of increase, were: Mississippi, from \$33,718,517 to \$57,451,445, or \$23,732,928, equal to 70.4 per cent.; Louisiana, from \$111,397,919 to \$186,379,592, or \$74,981,673, equal to 67.3 per cent.; North Carolina, from \$85,274,083 to \$142,520,776, or \$57,246,693, equal to 67.1 per cent.; Texas, from \$92,894,433 to \$150,528,389, or \$57,633,956, equal to 62 per cent.; Georgia, from \$94,532,368 to \$151,040,455, or \$56,508,087, equal to 59.8 per cent.; Alabama, from \$72,082,621 to \$109,169,922, or \$37,087,301, equal to 51.4 per cent.; South Carolina, from \$53,335,811 to \$79,376,262, or \$26,040,451, equal to 48.8 per cent.; Tennessee, from \$92,749,129 to \$137,960,476, or \$45,211,347, equal to 48.7 per cent.; West Virginia, from \$67,006,822 to \$98,898,357, or \$31,891,535, equal to 47.6 per cent.; Florida, from \$34,193,509 to \$50,241,078, or \$16,047,569, equal to 46.9 per cent.; Arkansas, from \$38,481,078 to \$53,864,394, or \$15,382,716, equal to 40 per cent.; Virginia, from \$108,644,150 to \$148,856,525, or \$40,212,375, equal to 37 per cent.; Kentucky, from \$126,508,660 to \$159,753,968, or \$33,245,308, equal to 26.3 per cent.; Maryland, from \$210,343,559 to \$243,375,996, or \$33,032,437, equal to 15.7 per cent., and the District of Columbia, from \$16,426,408 to \$18,359,159, or \$1,932,751, equal to 11.8 per cent.

The capital invested in manufactures, including neighborhood industries and hand trades, in the South in 1900 was \$1,153,202,398, and the value of the products was \$1,463,643,177. If the same rates of increase have prevailed since then for neighborhood industries and hand trades as for factories proper, the capital invested in 1905 in manufacturing as that term was understood in 1900 was approximately \$1,902,783,000, and the value of the products was \$2,113,500,000.

WORKING FOR SOUTHERN IMMIGRANTS.

A letter from one of the most efficient executive officers of a Southern business organization asking the MANUFACTURERS' RECORD what steps would be necessary to have his State represented in an immigration bureau to be established in New York city, suggests that perhaps it will not be amiss for us to reproduce here the gist of our reply. Our correspondent sent us a newspaper clipping announcing that 10 Southern States were to establish the bureau. We have no reliable information of any action by the authorities of the States mentioned providing for the establishment of an immigration bureau in New York city. We do not believe that, comprehending the situation as to immigration at New York, the authorities of the Southern States would regard it as profitable to unite in establishing such a bureau there. The great mass of immigrants of value to this country arriving at New York have determined upon their destination in this country before they leave Europe. United States Commissioner Robert Watchorn, in charge of immigration at New York, was quoted only the other day to the effect that out of every 400 immigrants that land at New York 399 know exactly where they are going, and that the best chance one had is to get them after they have reached their destination.

As a matter of fact, the place where State energies should be exerted for immigration is in the foreign country

from which it is desired to attract immigrants. Hon. G. W. Koerner, commissioner of agriculture of Virginia, is now, we believe, in Europe on just such a quest in the interests of his State. The last general assembly of Virginia appropriated \$10,000 to strengthen the hands of Commissioner Koerner in his work for bringing in settlers. Nearly every Southern State has either an immigration bureau or some department of its government which could readily be turned into an effective immigration bureau, and, under the direction of a practical man and with liberal support from the State treasury, could make known abroad the advantages and opportunities of the State for newcomers and arrange with transportation companies for the proper handling of the immigrants. And this should be done without relaxing the efforts to attract settlers from other parts of the country to the more desirable regions of the South.

There are few railroad companies in the South which would not heartily co-operate with State authorities in this work, and there are thousands of individuals—manufacturers, farmers and others—who would welcome such co-operation and do all within their power to further its ends and to enjoy its benefits.

Our experience and observation lead us to view with disfavor plans for immigration to the South, no matter how "Southern" they may call themselves and no matter how good their intent may be, unless they are well conceived upon some such basis as the State immigration bureau of Maryland, the agricultural department of Virginia, the land and industrial department of such transportation lines as the Southern Railway and the Illinois Central and half a dozen other lines in the South, the bureau established at Atlanta by a number of railroads operating in Georgia or the organization recently effected in Louisiana providing for unified action by the State authorities and business organizations for immigration.

Conventions, conferences, congresses, parliaments, etc., assuming to be representative of the whole South in this matter, have seldom been representative of anything but ability in wind-jamming with borrowed bellows, a desire for brief notoriety in direct proportion to lack of capacity, or a purpose to create for one's self a salaried position for which there is really no demand, and in one recent case the designation "Southern" was used as a cover for an immigration scheme concocted abroad primarily for the benefit of a foreign country and holding the South's advantage as hardly of secondary importance. Such movements cannot be representative of the South for the simple reason that hardly any two Southern States have identical needs in the matter of immigration, and they usually have vanished into the thin hot-air which they, themselves, have generated as soon as the attempt has been made to realize upon the idea of initiation fees or membership dues.

The MANUFACTURERS' RECORD has preserved the facts about the most promising of such undertakings during the past decade, and, perhaps, the most interesting fact about the gatherings, changing their titles as their pretexts have changed, is the persistence with which certain individuals have almost unvaryingly come to the front in them with enthusiasm, especially when there has been the scent of a salary, and an effrontery unappalled by the knowledge, which they ought to have, that the

words of their dreams or fairy tales have been preserved in print and are readily comparable with later repetitions by themselves or by their understudies.

THE QUEST FOR A PERFECT MOTOR CAR.

Notwithstanding all the criticism of an unfavorable nature which has been showered upon it, the motor-car idea persists among railroad men, many of whom are confident that a new type of combined car and locomotive will finally be granted general approval for the handling of certain classes of railroad passenger traffic. Not only the Union Pacific, but the Chicago & Alton, the Missouri, Kansas & Texas and other railroad companies are experimenting with one or another of different types of motor cars which at present are of three principal varieties—gasoline, gasoline-electric and steam. Each has its advocates, and the trying-out process now under way is expected to demonstrate superiority for one or another of these cars.

It seems that the principal difficulty with the simple gasoline motor is that of securing variable speeds as desired without undue wear or tear upon its machinery. The Union Pacific car operating between Houston and Galveston, Texas, has been sent into the shops several times for the purpose of making alterations in its mechanism, and reports from those places say that it is being steadily improved, but that there is nevertheless no doubt of its success and practicability. Since that car was built at Omaha the company has constructed several others, the latest being the No. 7, which was recently illustrated and described in the MANUFACTURERS' RECORD. It is said to be a machine of great efficiency, besides being thoroughly weather and dust proof.

In the gasoline-electric motor car some critics, considering it from a mechanical point of view, claim that the ability to regulate speed as closely as may be desired is attained only at the expense of heavy first cost, and as for the steam motor, it is open to the objections made against all locomotives with boilers, mainly that considerable dirt, heat and smoke accompany their operation, and some sloppy and dusty work is required to put them in proper condition after they have been in service. Yet the efficiency of these motors is acknowledged, although they are recognized as being only a higher variety of the old-fashioned dummy car. Moreover, the economy of steam is a point in its favor.

Undoubtedly the persistence with which inventors and designers of railway motive power are clinging to the gasoline-motor idea is due mainly to its achieved success in the propulsion of automobiles and motor boats. It appears reasonable enough to argue that if automobiles can be driven continuously at varying rates of speed over ordinary carriage and wagon roads of varying degrees of excellence and inferiority, motor cars can be run on railways, which are always in order for travel, not being subject to the difficulties of ruts, stones and other impediments of like nature. Upon this presumption the motor-car advocates are proceeding, confident that their efforts will be rewarded with success.

There is indeed good reason to hope for victory for the motor car, because of the final triumph of steam locomotives and electric cars, both of which were similarly confronted by many objections and other obstacles, but all were suc-

cessively overcome by inventors and builders who would not be discouraged. Moreover, there is a belief that a more rapid extension of railroad facilities will ensue if a generally satisfactory motor car is produced. Those who so believe see in such a car economy both in first cost and in operation for railways which may not now be operated by means of either electric cars or steam trains, because the former demands the erection of power-houses and the latter requires heavy equipment, while either needs larger numbers of men employed than the sections to be served could support by traffic. Furthermore, existing railroads expect to convert non-paying branches into profitable feeders by the substitution of motor cars with only a motorman and a conductor on each, instead of trains, each of which would demand the employment of several more men.

The projectors of several new railroads in the South are looking to the inventors and designers of gasoline or other motor cars to provide them with means for hauling the traffic that they expect. Their desire is to eliminate power-houses from their plans if possible, thus saving the capital which would go into costly plants. Meanwhile other builders are choosing electricity to operate their lines, believing that the perfection of the motor car cannot be waited for without loss. However, it may be that the production of a gasoline coach combining all the features which are now desired will come upon the railroad world as suddenly as did the success of the electric car, and be likewise followed by a vogue in its way as great as that which welcomed the mysterious force among railroad motive powers.

THE MANUFACTURING CENSUS.

Publication of preliminary figures, which are understood not to include four States, comparing American manufactures in 1900 and 1905, has led to some confusion on the part of students who overlook a proper explanation by the Census Bureau. The figures as published show an increase in capital invested from \$5,166,172,164 to \$7,375,930,540, or 42.8 per cent., and in the value of products from \$6,807,801,288 to \$8,980,454,376, or 31.9 per cent. Even were these figures the totals, persons, on the one hand, who would compare the totals for 1905 with the totals as published by the census of 1900 might, as has been the case in a number of instances, imagine that the enumeration giving the figures for 1905, or correctly for December 31, 1904, were not correct, and persons, on the other hand, with no thought of the original figures of the 1900 census, might be led to believe that the country had not in this respect made as great an advance as was to be expected. In both cases the fact is overlooked that in the 1904 enumeration certain schedules of the 1900 census were disregarded, and that the 1905 figures are compared only with similar figures of 1900. The explanation has been made in the 1905 bulletins of the Census Bureau as follows:

This is the first census in which the canvass has been confined to manufacturing establishments conducted under what is known as the factory system, thus excluding the neighborhood industries and hand trades. The statistics for these mechanical trades have been a confusing element in the census of manufactures, and their omission confines the data to a presentation of the magnitude and growth of the true manufacturing industries of the country. To secure comparable figures for 1900 it was therefore necessary to revise the published reports of the Twelfth Census, and in comparing the results of the present with former censuses the different

bases should be held in mind. The revision of the published statistics for 1900, necessary for purposes of comparison, involved considerable difficulty. Certain industries, such as custom millinery, custom tailoring, dressmaking, taxidermy, cobbling, carpentering and custom grist and saw mills were wholly omitted. But the only available information on which to base the elimination of non-factory establishments from industries which included factories as well as local establishments was that contained in the original reports from these establishments, and those reports were not collected with such segregation in view. It was found that some establishments, which in 1900 did little real manufacturing, had in the five years developed into true factories. On the other hand, in certain establishments the strictly manufacturing operations conducted in 1900 had later been discontinued, although the establishments were still in business doing custom or repair work only. The latter class, however, was composed mainly of small establishments, and, except as to the number reported, their inclusion or omission has little effect on the statistics.

The means for an absolute comparison of the manufacturing statistics of 1905 with what were held to be the manufacturing statistics of 1900, including the neighborhood industries and hand trades, do not, therefore, seem to be available. But if in the omitted industries the same progress has been made during the past four or five years as in those for which the census makes comparisons, it is not at all unlikely that the advance has been made in capital invested from \$9,800,000,000 to \$13,994,000,000, and in the value of products from \$13,000,000,000 to \$17,147,000,000.

NO REST FOR THE WEARY.

How long will Southern newspapers continue to be stuffed whenever anybody, for one purpose or another, chooses to call a "Southern convention?" Several weeks ago an announcement was made of a "convention" which was to include 300 members of the New York and Liverpool cotton exchanges, about the same number of cotton merchants, 48 mill representatives from New England, 200 members of the Southern Cotton Association and the Farmers' Union, the governors of 12 States and 10 other representatives appointed by the governors, and 12 men from the Department of Agriculture and the census bureau. On its face the thing was so obvious that it was amazing that serious attention was given it. But the advance notices continued to dribble, and as late as May 25 stated that "it will be the largest cotton convention ever held in the United States, delegates numbering into the thousands and from all of the cotton-growing States having been invited and a large percentage of these will be in attendance." On the day of the assembling of the "congress" a North Carolina paper published a dispatch from the place of the "congress" containing the following:

"One of the most important meetings of interest to the cotton industry of the South which was ever held in this part of the country is the convention of cotton men which opened here today. More than 1000 delegates, representing every district of the 12 cotton-producing States of the South, are in attendance, including several governors, mayors of cities, brokers, cotton planters, bankers, merchants and cotton manufacturers. Every governor of the 12 cotton States sent 10 delegates to represent his State, while the mayor of nearly every Southern city in the cotton belt appointed one delegate."

A report of the same date from the same place to a St. Louis paper said: "Delegations representing two States met here today . . . to discuss means for the betterment of the cotton-growing industry." Among the twenty-odd names mentioned in the proceedings, and presumably the names of the majority of the leading members of the "congress," were the names

of four persons from Arkansas, four from Texas, three from Indian Territory and one each from Oklahoma, Mississippi, Missouri, Tennessee and Louisiana. Another interesting fact reported in a Tennessee paper of the same date was that "each guest was given an annual pass over the railroad leading to the resort." The railroad is about five miles long.

DRAINING THE LOWLANDS.

Representatives of several of the coast counties of South Carolina took steps last week at Charleston toward securing the drainage of Beaufort, Berkeley, Charleston, Clarendon, Colleton, Dorchester, Georgetown, Hampton, Horry and Williamsburg counties. The State legislature will be asked to make drainage work compulsory in the counties, and the people of the territory proposed to be drained will be urged to proceed with drainage as a county matter, and thus make such a demonstration as will have the effect of securing federal aid if such aid be provided. In that is reference to a widening movement in Congress for a reclamation of lowlands in the country upon a basis somewhat similar to that for the irrigation of the arid lands of the West. Millions of most fertile acres, especially in the South, may be brought under cultivation through drainage, and there is so much at stake that the people should leave nothing undone and disregard no legitimate means for making the improvement possible.

WHEELING.

Under the auspices of the Wheeling (W. Va.) Board of Trade, of which Mr. H. C. Franzheim is president and Mr. R. B. Naylor is secretary, there has been issued an attractive illustrated pamphlet containing facts and figures about the city, its commercial and industrial progress and its resources. It contains a long list of articles manufactured in Wheeling, and illustrative of its industrial importance is the fact that the annual tonnage of the city is 5,291,000, of which 1,196,000 represent manufactured articles and merchandise, 1,071,000 iron products, 1,260,000 ore, 882,000 coal, 630,000 coke and 252,000 stone, the whole requiring 264,550 cars. The 15 banks of the city have an aggregate capital of \$2,387,000 and \$17,000,000 of deposits. The advantages of the city mentioned include cheap and abundant fuel, both coal and natural gas; shipping facilities by river and railroads; market at its doors and easy access to all the markets of the country; close proximity to a great supply of raw material; abundance of labor, both skilled and unskilled; established prestige and low rate of taxation.

THE COTTON MOVEMENT.

In his report for June 22 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight for the 295 days of the present season was 10,586,157 bales, a decrease under the same period last year of 2,039,785 bales; the exports were 6,184,680 bales, a decrease of 1,831,601 bales; the takings were, by Northern spinners, 2,263,312 bales, an increase of 96,787; by Southern spinners, 2,016,860 bales, an increase of 86,127 bales.

SOUTHERN FARM MAGAZINE.

A leading feature of the *Southern Farm Magazine* for July is a mass of letters from Southern manufacturers and business men of the South telling of the shortage of labor there in many lines and indicating a strong desire to supplement the supply through foreign immigration. Features of the general work for immigration to that section are also described. Poultry, live-stock, forage crops and other subjects bearing directly upon the practical work of the farm are discussed, while interesting comments upon current events,

upon education, politics, etc., are presented from fresh points of view, giving the issue a character appealing to a wide body of readers.

The *Southern Farm Magazine* is published monthly by the Manufacturers' Record Publishing Co., Baltimore, Md. Price \$1 a year.

PAPER FROM COTTON STALKS.

A Company Formed to Develop a New Industry.

Mr. W. W. Gibbs, Pennsylvania Building, Philadelphia, Pa., writes the MANUFACTURERS' RECORD that the organization of the Cotton Stalk Products Co. was completed last week, the company having been chartered under the laws of Maine with a capital stock of \$3,000,000 7 per cent. preferred and \$12,000,000 of common stock. Mr. Harvie Jordan, president of the Southern Cotton Association, has been elected president. Among the directors are Mr. W. P. G. Harding, president of the First National Bank of Birmingham; Mr. W. H. Hassinger, until recently vice-president of the Republic Iron & Steel Co. and a number of other leading Southern business men. This company has been organized for the purpose of manufacturing pulp and paper from cotton stalks under patents of M. W. Marsden of Philadelphia. Samples of pulp in the natural color and bleached and samples of paper made by these patents indicate that it will be possible to make a very high grade of paper out of the fiber of cotton stalks. It is stated that the by-products of alcohol and fertilizer ingredient made in the process of manufacturing pulp will reduce the cost of pulp and paper to such a figure as to make it possible for cotton-stalk paper to control the market as against wood pulp. If this be true it will not only be of immense advantage to all users of paper and of immense advantage to the South in adding to this section a new industry consuming a hitherto waste product, but it will at the same time be a great blessing to the country in lessening the destruction of forests for paper-making.

If this enterprise be carried out on the lines indicated it ought to very greatly add to the development of the South by the utilization on a large scale of a product hitherto absolutely without value, and at the same time complete the circle of utilizing every part of the cotton plant and its product.

The Interstate Club.

A very interesting movement looking to a close affiliation and acquaintanceship of business men North and South is being worked out in the organization of what is to be known as the Interstate Club, of which United States Senator J. C. S. Blackburn is president. This club proposes to secure a membership among the leading men of the entire country and to establish in North Alabama, somewhere in the region of Florence, a clubhouse which it is intended shall be a general meeting-place for people of the North and West who want to spend a portion of their winters in the South and while doing so come in touch with the foremost men of the South. Among those who have recently accepted membership in the club are Hon. Grover Cleveland, President Roosevelt, Speaker Cannon, Secretary Shaw, Senator John T. Morgan and others prominent in public life.

The Dickson Car-Wheel Plant.

The MANUFACTURERS' RECORD has received from the Dickson Car-Wheel Co. of Houston Texas, a description of the new plant that company is about to build. The company has purchased a site 250x1500 feet, where it will build a com-

plete new plant, consisting of a car-wheel foundry and a general foundry and machine shop, all fireproof and of modern construction. Plans have practically been completed, and the company is ready for bids on the building and machinery for the car-wheel foundry, which will have a daily capacity of 400 wheels—chilled car-wheels in the Barr contracting chill. The building will be about 150x320 feet; concrete wall up to three feet above ground, then 15 feet of continuous sash, then two feet of tile or concrete, with tile roof; inside of structure entirely of steel, no woodwork whatever to be used. Either a 96 or 102-inch cupola will be used to receive blast from a positive blower, electrically driven, direct connected. Sixty annealing pits will be required at the start, each to have a capacity of 20 wheels, and be in straight line with the hoisting apparatus, electrical or pneumatic. Two three-ton elevators, a wheel-breaker of 2200 pounds weight with 16-foot drop, a 10-ton reservoir ladle geared for electricity, and various other mechanical equipments will be needed, including an industrial railway. The power-plant will include a steam-driven air-compressor, to deliver 1000 cubic feet of free air per minute, with 120 pounds pressure at tank, or two machines of same capacity; two air-receivers, each of 600 cubic feet capacity; 220 horse-power generator, alternating current and 100 volts; 200 horse-power engine, Corliss type; four 100-horse-power water-tube boilers; heater for these boilers; two 400-horse-power feed-water pumps, and the necessary motors for the machinery enumerated. In all cases, where possible, the machinery is to be direct connected. The Dickson Car-Wheel Co. not only manufactures car-wheels, but builds saw-mills, cotton-oil mills, cotton compresses and other plants. Its president and treasurer is John F. Dickson, and Henry H. Dickson is vice-president and secretary.

Building in the United States.

During the year 1905, according to the United States Geological Survey, 184,416 building permits were issued in 47 leading cities of the United States, and buildings valued at \$640,555,641 were erected. This shows a considerable gain in building operations over the record of the previous year, as the number of permits given in 1904 was 139,373 and the cost of the buildings erected was \$466,690,710. Figures for 1905 follow:

| City. | No. of permits. | Cost of buildings. |
|---------------------|-----------------|--------------------|
| Allegheny, Pa. | 816 | \$2,412,570 |
| Atlanta, Ga. | 3,439 | 3,312,931 |
| Baltimore, Md. | 2,976 | 16,638,200 |
| Boston, Mass. | 2,349 | 12,964,747 |
| Brooklyn, N. Y. | 19,679 | 73,017,706 |
| Buffalo, N. Y. | 2,886 | 7,401,006 |
| Cambridge, Mass. | 470 | 1,659,875 |
| Chicago, Ill. | 16,150 | 65,000,000 |
| Cincinnati, Ohio. | 3,307 | 9,709,450 |
| Cleveland, Ohio. | 4,976 | 9,777,145 |
| Columbus, Ohio. | 2,133 | 5,107,400 |
| Dayton, Ohio. | 1,476 | 2,250,000 |
| Denver, Col. | 2,455 | 6,374,537 |
| Detroit, Mich. | 4,021 | 10,462,100 |
| Fall River, Mass. | 291 | 885,325 |
| Grand Rapids, Mich. | 1,486 | 2,145,265 |
| Hartford, Conn. | 664 | 3,076,092 |
| Indianapolis, Ind. | 4,041 | 7,235,325 |
| Jersey City, N. J. | 1,352 | 3,330,522 |
| Kansas City, Kan. | 818 | 1,172,093 |
| Kansas City, Mo. | 4,437 | 10,917,024 |
| Los Angeles, Cal. | 9,543 | 15,382,067 |
| Louisville, Ky. | 2,255 | 4,596,382 |
| Memphis, Tenn. | 2,882 | 3,554,883 |
| Milwaukee, Wis. | 4,166 | 9,806,729 |
| Minneapolis, Minn. | 4,835 | 8,905,205 |
| Nashville, Tenn. | 5,636 | 2,609,889 |
| Newark, N. J. | 2,379 | 10,214,615 |
| New Haven, Conn. | 467 | 2,143,240 |
| New Orleans, La. | 1,970 | 4,070,077 |
| New York, N. Y. | 10,943 | 178,032,527 |
| Omaha, Neb. | 885 | 4,387,464 |
| Philadelphia, Pa. | 15,933 | 34,416,745 |
| Pittsburg, Pa. | 4,273 | 17,159,443 |
| Providence, R. I. | 1,358 | 4,562,350 |
| Reading, Pa. | 1,548 | 2,791,055 |
| Richmond, Va. | 451 | 1,501,000 |
| Rochester, N. Y. | 1,707 | 5,676,624 |
| St. Joseph, Mo. | 877 | 670,195 |
| St. Louis, Mo. | 8,285 | 23,434,734 |
| St. Paul, Minn. | 1,657 | 8,536,346 |
| San Francisco, Cal. | 5,420 | 18,268,753 |
| Scranton, Pa. | 1,144 | 2,212,929 |
| Seattle, Wash. | 1,677 | 6,704,784 |
| Syracuse, N. Y. | 837 | 2,275,610 |
| Washington, D. C. | 7,577 | 12,308,843 |
| Worcester, Mass. | 739 | 2,182,840 |
| Total. | 184,416 | \$640,555,641 |

NORTH AMERICAN GOODS IN SOUTH AMERICA.

By FRANK A. WARDLAW.

[Written for the Manufacturers' Record.]

Much has been said in consular reports and in private letters on the subject of our trade, or lack of trade, with the South American republics, and the writer hopes that the American manufacturer who reads this will take to heart the facts therein expressed or implied for the betterment of our trade relations with those countries.

One of the first things one hears, on making an investigation of these trade relations in South America, is the almost universal custom of the North American manufacturer to refuse to extend credit. He almost invariably makes his terms f. o. b. New York, payable by sight draft on presentation of the bill of lading. On the other hand, the German, French and the English manufacturers are willing and anxious to do business on the credit system, and for that reason they are today the largest exporters of almost all classes of material into these countries. It is by no means exceptional to find buyers asking that their bills be dated three to four months ahead, and then giving a four or even six months' note in payment of the account. Of course, this carries interest, and is nearly always paid when due, provided, of course, the exporter takes the usual precautions to investigate his customer's standing before agreeing to any such terms. With equal qualities of goods it becomes simply a question of prices and terms of payment to secure the order.

The South American does not decry North American goods, for he well knows the progressiveness of that great republic and the excellence of its productions, but he does resent the reflection on his integrity, the trouble and expense it puts him to to arrange for the necessary depositing of the money in New York before the shipment of his goods, with no assurance that when they arrive at their destination they will be in exact accordance with the promises of the agent who sold them or the samples sent him for his examination. Our manufacturers, while seeming to be anxious to build up a large export trade, are today doing all in their power to kill that laudable desire by regarding export simply as a means of getting rid of their surplus products or keeping their works busy during dull times at home. It seems to be a side issue with us, whereas it is a very vital question to the European. The chief result of this, therefore, is that the European sends out to South American countries the very best material and workmanship he is capable of producing, while, on the other hand, our American manufacturer seems to regard the field as a sort of dumping-ground for obsolete or defective material that could not be sold as first quality in the domestic market. Never was any impression farther from the truth, and never has the patriotic American, anxious for his country's welfare, been subjected to more humiliating and embarrassing situations than when his attention is called to the superior workmanship and material sent to South America over those furnished by the manufacturers of his own country. This humiliation is the more humiliating because he well knows that his own people, the most progressive and up to date in the world, with their admirable workshops and skilled workmen, can produce articles equal, if not superior, to any made, but because of lack of information concerning South America and its people, the requirements of its business men for none but first-class goods, they do persist in sending abroad articles of inferior merit that would be rejected at home.

Durability and general simplicity of design play an important part with the South American buyer, and the writer regrets to record the fact that his attention has recently been called to several instances of American agricultural machinery having gone to pieces after two or three years' use, whereas similar ones of European make are still strong and efficient after eight years of hard service. The same is true of steam engines, including locomotives. The European engine gives better results than its American competitor, both as to general durability, finish and economy of operation. Why should this be, when we have more than double the railway mileage, double the experience (and good sound practical experience it is, too) in the design and construction of railway material, as well as in the design and construction of high quality, high efficiency, power-producing apparatus of almost every description, of any other nation? The American manufacturer knows best how to answer this question, leaving aside the cheapness of coal at home, and it is earnestly hoped he put on his thinking cap and make a radical change in the state of affairs in the future.

Articles of wearing apparel, such as shoes, hats, etc., bearing North American brands are well liked and extensively called for, especially in the larger cities of the country, but the native American knows at a glance that they are an inferior article to that he buys at home bearing the same brand. This is true of many other articles also, though there are some creditable exceptions to the rule.

Is it a wonder that we do not have a greater trade with these countries when we recall the fact that quite a large number of bright young men representing their various countries, who are now attending our colleges, schools of technology and principal shops as students, and who are accustomed to see and use our products while in the United States, returning to their native lands full of good impressions and words of approbation for things American, find there a different standard of excellence to that they have been accustomed to, and can then but think themselves and convey to their fellow-countrymen that we are a nation of schemers and dishonest dealers, who do not sell them what they pay for.

Still another habit our manufacturers or their representatives seem to have in many cases is their propensity to ride the high horse and expect trade to come to them, instead of their using the same methods they would at home to solicit that trade. This is not an uncommon experience at home, but it is by no means as general as it is abroad.

Another very important reason why our trade relations with South America are so much less than they should be is the great length of time it requires to get anything from the States and the infrequency and uncertainty of both freight and mail steamers. Absolutely no dependence can be placed upon the arrival of the latter below Rio de Janeiro, letters from New York to Buenos Ayres, for example, frequently taking 36 or even 40 days, as shown by the postmarks (United States Postoffice Department please take notice). Freights are equally irregular. In contrast to this, European countries maintain a very regular and reliable service, both mail and freight, that can always be depended upon.

For the purpose of enlightening some of our home manufacturers and the people of the United States in general as to the vast and rapidly-growing amount of goods

imported by some of these countries, the importations for 1905 for the Argentine Republic are herewith appended, together with some data as to population and other information not generally known. Brazil and Chile are also well worthy of note, their annual commerce for 1905 being \$291,951,000 and \$116,700,000, respectively. The importations were \$117,000,000 in the former and \$54,000,000 in the latter. The Argentine Republic occupies amongst the other countries of the world the fifth position, with a factor of commerce percentage of \$103.50 gold per inhabitant.

Argentina has an area in square miles of 1,158,400; population, 6,000,000; railway companies 18, with 11,047 miles; government lines 3, with 1500 mileage.

The tonnage handled by private lines in 1905 was 18,473,472, and government lines 1,253,534. The passengers carried by private lines in 1905 was 22,540,922, and by government lines 579,173.

Immigration during 1905 was 221,622, and emigration 82,772.

The value of imports in 1905 was \$205,000,000 gold, and of exports \$323,000,000. There is one city of 1,000,000 population or over, one of 100,000 or over, two of 50,000, four of 25,000, fourteen of 10,000 and three of 5000. The population of

Argentina increased between 1900 and 1905 from 4,512,342 to 6,101,000.

In the same period the value of imports increased from \$113,485,369 gold to \$205,154,420 gold, and of exports from \$154,600,412 gold to \$322,843,841.

The capital city of the Argentine, Buenos Ayres, had a population January 1, 1906, of 1,034,781, eight street-railway companies with 300.8 mileage, which carried 179,186,434 passengers; 213.5 miles of electric line and 87.3 miles horse lines.

Clearing-house bank operations in 1904, \$379,127,804.22 gold. The principal ports of Argentina are Buenos Ayres, Rosario, La Plata and Bahia Blanca.

As a conclusion, the writer would respectfully suggest to our American manufacturers that if they mean business in their endeavor to secure the trade and good-will of these rich and rapidly-growing republics of the South they must "get a move on," to use a home expression, and deal as faithfully and conscientiously with them as they do with the domestic purchaser, using every means in their power to promote friendly and trade-winning relations, or else retire from the foreign market altogether, for the methods too frequently employed at present are a detriment, and not a help, to us as a nation of the first magnitude.

Great Terminal Improvements at Brunswick.

By COL. C. P. GOODYEAR.

[Written for the Manufacturers' Record.]

Brunswick has always been known as one of the deep-water ports of the South. Due to improvement conducted by the writer from 1891 to 1899, the channel depths were increased to 25½ feet. There was no work of any character done thereafter until January, 1903. The remarkable result of practical self-maintenance, a loss of but one-half foot in four years, unprecedented in the history of harbor deepening, and that at but one point in the channel, has been repeated in the conditions, since a year ago the army engineers carried the depth to 26 feet, docks to sea, greatly widening the channel. There has been no perceptible shoaling. The result of this deepening is illustrated by a commerce increasing from \$5,600,000 in 1893 to over \$30,000,000 for the calendar year 1905, an average increase per year of over \$2,000,000.

These results of deepening and approximation to self-maintenance have attracted the attention of the government and procured a recommendation of the resident army engineer, the chief of engineers and the Secretary of War for an appropriation to carry channel depths from docks to the sea of 30 feet as easily procurable for a modest outlay, equivalent to an assurance of such appropriation in the next river and harbor bill.

This deepening and the resulting increase in commerce and the self-maintenance also attracted capital to the construction of the Brunswick & Birmingham Railway, which in turn was absorbed by the Atlanta, Birmingham & Atlantic, which is rapidly pushing its line to Atlanta and Birmingham. The road to Atlanta will be completed in 1907 and to Birmingham early in 1908. The capital for this line is largely furnished by the Old Colony Trust Co. of Massachusetts, the Moses Taylor estate and other large financial institutions in New York and New England. This company is laying 80-pound steel rails, buying the latest improved motive power and cars; preparing, in a word, upon broad lines for an immense business. The business it is already doing upon the 400 miles of completed line is most gratifying. The

territory already traversed by completed line is a magnificent timber and agricultural section, growing by leaps and bounds. The territory this line reaches at Atlanta and in the Birmingham district, the Gateway City and the Southern Pittsburg, needs no description. The owners of this railroad property have large investments in Atlanta, and local iron and marble investments on a large scale in the Birmingham district. This line reaches the entire Northwest and West upon arrival at Birmingham through the Illinois Central and the Rock Island, although it will maintain its independence. So much for what is being done in the way of railroad construction.

The city gave a shop location upon the eastern side of the peninsula upon which Brunswick rests and 900 feet of water-front. The company acquired 1700 feet more of water-front, making a continuous frontage of 2600 feet. Before commencing improvement the company purchased all intervening lands between the shop site and the water-front, giving it a continuous stretch of terminals in the southern portion of the city of 140 acres, unsurpassed by that of any railroad.

The company also purchased immediately north of the Oglethorpe Hotel a magnificent site for local freight and passenger stations and offices. Simultaneously it is erecting the freight and passenger stations and office buildings north of the Oglethorpe and constructing piers and slips and warehouses on its 2600 feet of water-front suitable for 30 feet draft, capable of handling 30 large vessels at a time. The expenditures contracted for, including the steamships, to exceed \$2,000,000, for these water terminals, are unequaled anywhere in the South, except, perhaps, at Galveston. The Fore River Shipbuilding Co. of Quincy, Mass., has the entire contract.

The North American Dredging Co. is now working night and day pumping to the marsh 10,000 cubic yards average each 24 hours, and has made in a few weeks over 18 acres of high land which was marsh when it commenced work.

The entire frontage is to show 30 feet depth and the slips the same. The piers are to be built for all time of concrete piling and solid filling by the dredge.

A. F. Chapman & Co. of Buffalo are the contractors for warehouse construction and are at work. Some of the warehouses on the slips are to be 800 feet in length, and coal chutes and all improved appliances for handling freight are a part of the contract.

Four steamships of over 3000 tons each are under construction by the Fore River

Shipbuilding Co., to run to New York, Baltimore, Philadelphia and Boston, the number to be increased as business increase warrants. The first ship is to be ready in November, the others in January, 1907.

The Southern Railway is erecting magnificent additional warehouses for an import trade.

I think we may say Brunswick has "arrived;" is prepared to take her full part in the wonderful romance of Southern development, yet in its infancy.

SOUTH GEORGIA—BRUNSWICK.

By H. A. WRENCH, Secretary Brunswick Commercial League.

[Written for the Manufacturers' Record.]

Probably no section of the United States can show more marked progress than South-east Georgia within the past 20 years, and with more incisive bounds for the past 10 years, and yet there is so much inducement to the wise investment of capital and large increase from small investments that it is difficult to write facts without leaving an impression of exaggeration or apparent contradiction of present opportunities. But for justice to this evolution, which has most widely swept, the pledges of the two last census reports should give confidence to the most optimistic prophecy. From 1890 to 1900 the eleventh congressional district, of which Brunswick is the commercial center and tide-water port, showed the largest increase of population, the greatest percentage of wealth, the largest number of phenomenal new towns of any district in the State. From the smallest district, numerically, it has become the largest.

In the two decades three towns have grown from the stump to populations of more than 3000, and a dozen others from 1000 to 2000. Along the Southern Railway between Macon and Brunswick are lands with no urban incitement that have increased from \$1 and \$2 per acre to \$20 and \$50 per acre, due to agricultural value. Within this scope of years it was no uncommon outburst of philanthropic commiseration to hear the Florida tourists wonder what was to "become of these poor devils when the timber was cut off." From these surroundings has sprung an opulence of farmers whose increase has come too easily to impress them with their gift of fortune, only as community academies and the higher colleges have toned up from the branches a more inviting civilization. Possibly it was one of the wise economies of Providence that the fertility of this soil was withheld from discovery until the demands of a growing country should realize the excellence of its timber and the by-products that enter into the world's shipping commerce. If we can make apparent the general condition by a simple illustration, the tendency of this wealth increase becomes more plausible.

But few of the pioneer saw-mill men made money, and during the stringency of the nineties their timbered lands sold for \$1 and \$2 per acre. The prosperous era has increased the timber values alone in successive leases for naval stores, saw-mill and crosstie privileges to \$8 and \$10 per acre, with a soil value left of \$2 or \$3 per acre, that increasing population and agricultural development is sending up in leaping bounds \$1 and \$2 per acre a year.

In the meantime the crisscross of saw-mill tram railroads have been merged into short cuts for the trunk lines, while others have been grouped into systems that give this erstwhile wilderness of wailing pines the greatest railroad mileage of any congressional district in the State, with possibly the one exception of that which has Atlanta for its center.

To the brightness of the present these

things point with unerring accuracy. From Brunswick's liberality of terminal facilities and a basic start of the Brunswick & Birmingham Railroad and the pick up of these old trainways we have the Atlanta, Birmingham & Atlantic Railroad system and its allied steamship lines from Brunswick to New York, Philadelphia and Boston, rushing to completion as fast as money will build and equip, tempting an equalizing balance of tropic between the grain fields of the West, the coal and iron fields of Alabama and the commerce of our Eastern coast—a brilliancy of farseeing railroad planning that cuts distance, time and freight rates by an air line of sea and soil to an immense development of trade.

By the same process the John Skelton Williams syndicate has from these merged bypaths grouped a trunk line from Augusta to the Gulf, the interstate importance of which may be regarded with interest. Another is the Drew Railroad, picking its way from a Gulf point through virgin belts of pine to Brunswick. Yet another is the Darien & Western, seeking tidewater at Brunswick and an eastward way that may prove important. The consequences of these roads that slip by sinuous step into our midst scarcely arouse the romance of thought till deep-laid plans are made.

Like the incoming tide that aroused Sidney Lanier's poetic fancy to the "Marshes of Glynn," immense dredges are now pouring sand from the channels of our bay and making new land of these marshes at the rate of an acre a day, upon which the Atlanta, Birmingham & Atlantic road is building concrete wharves for its Brunswick line of steamships, with warehouses, elevators and trackage that is to cost \$2,000,000. The Southern Railway is putting upon its Brunswick water-front an immense fireproof warehouse with elevated trackage and derricks to cost \$50,000; that means a larger traffic of exports and imports. These things are putting an impress upon Brunswick's future that is enlivening the present to such activity as has never been known.

The Southern Bell Telephone Co. has under contract a new and elegant brick home and a complete conduit system for its Brunswick exchange.

Glynn county is now offering to contract a \$75,000 courthouse to be built in Brunswick.

There are not in Brunswick sufficient workmen to take care of the private buildings contemplated and under way.

Brunswick contractors have recently closed for \$75,000 of improvements on Jekyll Island. At Waycross the Atlantic Coast Line is building shops estimated to cost \$250,000.

At Fitzgerald the Atlanta, Birmingham & Atlantic is building shops estimated to cost \$200,000.

Throughout this section of bulging activity every town has its projects of activity in various enterprises, and high prices and increasing demands has every

saw-mill and crosstie contractor pushed to his limit of labor capacity, with a market that leaves no wastage on the grounds.

In the meantime Brunswick has become the largest crosstie market in the world, and is only second in her lumber trade. These things point to the fact that this bleak region of a dozen years ago, where the saw-mills had denuded thousands of acres of land that many regarded as having passed to their finish, have, in their new discovery of agricultural value, only begun the development which makes substantial and lasting progress.

From a negro belt we are turning into a white belt, and it is very largely the well-to-do farmers of Middle and North Georgia that are buying and settling upon these lands, after a proof of their profit for farming purposes. It is these contiguous surroundings that are making the rapid increase of values and pointing to a most startling census report of 1910. I fear to mention some of the fanciful incidents whereby fortunes have been turned so quickly in this evolution of the derided wiregrass section, and have avoided Aladdin transpositions, but the reality is none the less impressive as a general condition.

Probably much of this rapid growth is due to the fact that large bodies of land may be massed behind the saw-mill, so as to permit of communities coming together by the influence of one settler drawing his neighbors after him and by such colonization reaping the reward of their improvements.

As one instance: One year ago the land upon which St. George has been settled was returned for taxes for \$960; the present year's returns are over \$100,000; as a matter of course, including improvements.

There are yet vast ranges of territory open to colonization, and so much a certainty of their settlement and increase as to keep up the ratio of growth that has set in as to make this section most inviting to investors. When towns and the surrounding country are moving forward with equal rapidity the sympathy is too tangible to question. And this is the condition of the territory herein named.

THE BIRMINGHAM DISTRICT.

Liberal Selling of Iron During the Past Week.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., June 25.

Since the break in the Southern iron quotations there has been a liberal selling of the product. The announcement has already been made by one company that it is about to withdraw from the open market on account of the numbers of orders taken in. The Sloss-Sheffield Steel & Iron Co. announced towards the last of the week that the sales during the first four days of the week were very healthy, and that a deal was under consideration for a large tonnage of iron, the prospects being good for a consummation of a deal. The production being at low ebb, there has been no accumulation in this district, despite the fact that some of the larger companies did not sell iron at very rapid clip while the \$14 rate was being maintained. The \$13.50 per ton rate, No. 2 foundry basis, had a tendency to bring out a number of purchasers. There was not a great amount of the product sold as low as \$13, and beyond the few orders reported from the East at that price it is not believed that quotation was kept up longer than a day or two. A denial came from one of the high officials of the Tennessee-Republic Company that there had been a liberal sale of iron at the \$13 rate. The smaller concerns in this district are reported to have been selling their iron at \$13.50 and \$13.75 per ton for some time,

and their order-books are pretty well filled. The indications point to a quick recovery in the Southern territory, the break in quotations last week bringing about considerable excitement. Officials of the Sloss-Sheffield Steel & Iron Co. still maintain that if there has been iron selling at \$13 per ton, No. 2 foundry, it has been sold at a low price and without cause. In their office it was stated that no iron had been sold by them under \$13.50 per ton.

Two furnaces are on the calendar to go into operation this week, No. 2 city furnace of the Sloss-Sheffield Steel & Iron Co. and No. 2 Ironaton furnace, Alabama Consolidated Coal & Iron Co.

The indications point to a steady operation of all rolling mills in the Southern territory. Arrangements are now being made for the starting up of more departments in the Birmingham rolling mills (Republic Iron & Steel Co.), and before long the plate and sheet mills will be on in full force.

The Alabama Consolidated Coal & Iron Co., Col. T. G. Bush, president, has signed a contract with the United Mine Workers, Alabama District, No. 20. The contract is the same that has been in effect for three years. T. H. Aldrich, for the Montevillo Coal Co., has also signed the contract, and the Commercial Coal Operators' Association will probably sign with the union miners before the end of the week.

The announcement is made that a large warehouse is being built in Birmingham for the International Harvester Co., and that after October 1 the distributing point for the big concern and Southern offices will be in this city. The warehouse is large enough to accommodate something like 75 carloads of machinery.

The Birmingham Contracting & Paving Co. has been incorporated by Eugene Fies, John Donelson and Ralph Fies; capital stock \$8000. The object of the company is to do a general contracting business for municipal, railroad and other corporations.

Big Contracts in New Orleans.

Announcements in New Orleans tell of large and important contracts recently closed in that city for mechanical equipment to be furnished the sugar industry in Cuba, Porto Rico and Mexico. They refer to the Eastwick Engineering Co. as having received the order to build a refinery which will cost \$3,000,000 in the Cordoba region of Mexico; to J. B. Craven's contract for a big sugar factory for the Esperanza Central Sugar Co., a \$750,000 enterprise of Naguabo, Porto Rico. It is also stated that Andrew W. Preston, president of the United Fruit Co., is prominent in the Nipe Bay Company, which has a capital stock of \$7,000,000 and will cultivate sugar-cane and build mills to handle 5000 tons daily on the north coast of Cuba. This latter company's contracts for machinery will doubtless be placed in New Orleans. The development of these Spanish-American countries is resulting in big contracts for New Orleans machinery builders and for the representatives of the machinery builders of other parts of the country.

Industries Wanted at Haskell.

The MANUFACTURERS' RECORD is advised that a cotton factory, a cottonseed-oil mill and a flour mill are wanted at Haskell, Texas. The Commercial Club of that little city can be addressed for particulars.

Needs a Chair Mender.

The MANUFACTURERS' RECORD is informed that there is a good opportunity at Spray, N. C., for a chair mender and bottomer. Information can be obtained by addressing L. McRae, Spray, N. C.

American Labor in Relation to Industrial Advancement and Immigration.

[Written for the Manufacturers' Record.]

In continuation of the discussion, begun last week in the MANUFACTURERS' RECORD, by American manufacturers and others of conditions of labor in this country as related to the advancement of manufacturing and the immigration question, the following letters are published:

Competition from Outside a Remedy.

W. H. Graves, proprietor Graves Shale Paving Brick Co., Birmingham, Ala.:

The supply is not sufficient for the needs of business, and consequently enterprises of almost every kind are restricted in their operations by this shortage of labor. The individual laborer and mechanic is much less efficient than formerly, because the labor unions have shortened the day's work about two hours per day and because there is a superabundance of work to be done in every department of business; consequently, the laborers and mechanics are much more independent of their employers than ever before, and if the employer is not pleased with the manner in which they work, and so expresses himself, they will throw up the job and are able to get a place with some one else without any trouble. There is some effort being made by the State, some of the railroads and a few of the larger industries to remedy this shortage of labor by importing foreigners into the State, in which effort they are having some success. In our opinion, the remedy for this shortage of labor is to press the importation of a good class of foreign immigrants into the State, which will come into competition with the labor we now have and force it to give better results than it is now giving to the employers, and thereby improve the industrial situation of the country.

For Immigration at Southern Ports.

J. W. Sibley, president and general manager Sibley-Menge Press Brick Co., Birmingham, Ala.:

There is a great shortage of labor, both skilled and unskilled, but especially the latter, in this district, and the output of the mines and factories has been curtailed in consequence. I agree with the secretary of our Commercial Club in stating that 10,000 unskilled and skilled laborers can find employment in the Birmingham district.

The individual laborer in our line of manufacture is, as a general proposition, more efficient than formerly. This is true, however, only of the white native laborer, as we find that the negro has become less efficient, and with the high wages prevailing and the scarcity of labor, does not work more than four-sevenths of the time, the general run being devoid of thrift or ambition. There are some exceptions to this, of course.

The Alabama Immigration Association is making efforts to increase the supply of labor by inducing immigrants to locate in Alabama, but the efforts are mainly directed to homeseekers. A number of the industrial concerns have, with more or less success, imported foreigners through agents at New York and New Orleans.

In my opinion, the establishment of ports of entry for immigrants at Savannah, Pensacola and Mobile would greatly help in solving the problem of the scarcity of labor. This, of course, would have to be followed up by the establishment of immigration associations throughout all the Southern States with means to exploit and advertise the advantages of this section through out consular representatives in the Old World. How to overcome the growing laziness of the negro laborer is a problem too deep for solution by me. I think that efficiency of the skilled laborer can be greatly increased by the establishment of trade schools, but to make them successful will require co-operation of both capital and labor, as heretofore the unions have not given much encouragement to the training up of skilled labor in this manner.

Where a Man Hunting Work Would Be a Curiosity.

G. W. Darden, Oneonta, Ala.:

There has been for the past five years a demand for labor that was not to be filled, on account of the number of men being limited. Wages have advanced from 75 cents a day to \$1.25, and in many places even more, for common every-day laborers, both white and black. Of course, the skilled laborer gets a better price. The demand for both classes, skilled and unskilled, is at no time supplied, although the price has increased from time to time, and the reason for the same is that the labor is not here. A man hunting work would be a curiosity. On account of the need of labor some industries are not going at their full capacity, and some enterprises are held up after being planned on account of the insufficient supply of labor.

Our farms are yearly robbed of the boys and girls that grow upon them, and they go to the towns and cities around, where better wages are paid, but where less money is saved, and on account of the unlimited demands of the cities, mines and furnaces and factories, there is not over the tenth boy and girl that stays at the old home. The country is regularly filled with rumors that good jobs wait for the country people in town. As soon as the boys and girls are old enough to leave home they enter this field, and unless there is a great supply furnished by immigration the farms of the country will decrease and the industrial portions of the country will exist and use and require the people of the country to keep these industries going. The products of the farms are bringing a good price, and have been for the past few years; the farmers are reasonably well off and are out of debt and have money in their pockets or in the bank with which to buy the necessities and some of the luxuries of life, and the day is past when the farmer will come to town and spend a half-day lying around the store of a little merchant asking to be allowed to give a mortgage on his crops and all his live-stock and lands to get the merchant to advance him the meat and bread with which to make a crop. The merchant would be glad to do it, but the means of the merchant are limited.

Those days of want and penury that fell hard on the farmer and laboring man passed when the great development of the South and the better price of cotton put money in the farmer's pocket. The credit system gave away to that better system, which is the only system that can exist under the spirit of brotherly love, the cash basis. The mortgages have decreased, and the man with a cash business is making more money than the one doing a credit business.

The laboring man is happier than he ever was, and his home is brighter and his family is healthier, but he can only do so much work. The demand is too great on him, and the farming industry, that backbone of civilization and refinement, is being weakened too constantly, and this branch will continue to suffer till the other and more inviting places are filled. I say inviting, not because the work is lighter or the hours shorter, but because the social conditions are more pleasant. The theater offers amuse-

ment. The churches are more convenient, and the pleasure parks are always crowded. In this way the average man and woman finds that work in city is better than less work on the farm. We must build up our country roads and make the ways of travel for the young farmer pleasant and more agreeable. Then our country schools must be built up and our boys and girls must be induced to live on these rich farms. The farms must be filled for many years by immigration, as well as the other industries must. The laborer is as skilled as he formerly was, and I think that he does as much and better work than he formerly did. I believe that with the improvement of tools and machinery that the carpenter can and does build better than he formerly did, and that all other trades have increased in like degree in skill and education.

The South has welcomed the coming of immigrant ships to the Southern ports, and the bringing in of people by the carload and shipload is the only way to keep the growth progressing that is now with us. It now appears that the good times have come to the South to stay. Why should this section not be the richest and most prosperous that the sun shines upon? It is a land by nature endowed with two great monopolies, the cotton plant and the pine tree. No other section of the world will produce these two growths like the South. It is the home of the cotton plant and of the pine tree, and the entire world has to look to us for the supply of these wonderful plants. Enjoying by nature these two great monopolies, the one of unlimited growth and cultivation, at no time has the South produced the tenth part of cotton that she is capable of, for not an acre that has been planted in cotton has produced its full limit, and by no means have all the acres been put in cultivation that are cultivable. In addition to this, the location of the cotton mill in the cotton fields will have a tendency to increase the price and production, and this will make the South richer. While the pine timber has been cut and wasted to a great extent, there still remains forests that are untouched. Then there are many acres that are growing again to timber, and it will be many, many, many years before the saw-mills will cease to cut this wonderful timber. Who will not say that the new South is better than the old.

A Shortage of 25 Per Cent. in All Branches.

H. M. de Montmollin, secretary and treasurer Stanton Foundry & Machinery Co., Palatka, Fla.:

The supply of labor, both skilled and unskilled, in this section is far below the needs. We attribute the scarcity in this particular section to the greatly-increased demands for labor in all industrial lines. This town and county now employ more than twice what they did a few years ago, and there is a shortage of at least 25 per cent. in all branches, including saw-mills, machine shops, factories, mining and farm hands. No definite efforts have been made toward bringing in foreigners, but the matter has been talked over to some extent.

Immigration as a Solution.

Jas. P. Field of W. E. Treadwell & Co., real-estate agents, Atlanta, Ga.:

The labor question is a serious one in the South. Since the agitation of the negro question by the politicians there has been a growing disposition on the part of the negroes to loaf, and they cannot be depended upon for steady work. The following incident at a large saw-mill near Tifton, Ga., will illustrate: The superintendent noticed that six or eight of the negro laborers would retire to a private place and stay there hours at a time. He tried to prevent this, and was thinking of discharging them, and spoke to the proprietor about it. He had learned that they were playing cards and dice. The owner told him to do nothing, but just get all the work out of them he could and not offend them, for if they should leave him his mill would have to stop, as he could not get any more. The writer was talking to a contractor a short time ago, when another contractor came up and contractor number one said: "Here I am thinking of importing about 40 Italians to help me on one of my contracts. What do you think of it?" Number two said: "I have been thinking of the same thing, only I had thought of Germans." They both left me and went off to discuss how best to decide their labor troubles. I thought, well, if my saw-mill man was here you would have three of a kind. Men of this kind are forced to put up with things like this all the time, and many are looking to immigration as the solution.

Attraction of Immigrants the Measure for Relief.

R. E. Watson, investments, Atlanta, Ga.:

The labor situation in this district is acute, both in the city and on farms. Labor is scarce and wages very high. This is due to an unprecedented industrial growth and prosperity. There are some slight efforts being made to attract immigrants, and it would seem that the success of this effort is the only possible measure that can afford relief.

Enterprises Seriously Handicapped.

N. P. Pratt, president N. P. Pratt Laboratory, Atlanta, Ga.:

All industrial enterprises in the South, as well as all similar enterprises in contemplation, are seriously handicapped for the want of proper labor supply, both skilled and unskilled. We do not know any better work you can do for the South at this time than to forward a movement by which the labor conditions can be bettered. The South is in a most remarkable condition of development in all branches of industrial enterprise, and unless the labor situation is relieved there is no way that imminent developments can proceed without serious difficulty.

Inclination of Negroes to Rest.

G. R. Lombard, president Lombard Iron Works & Supply Co., Augusta, Ga.:

While we have felt the scarcity of labor, it has not been so bad with us as it is with the cotton mills, farmers, brickyards, contractors and saw-mill men. The complaint seems to be universal. Especially is it so with the call for rough labor, helpers, etc. We could use a few more good trade men. I had a talk lately with several brickyard men. They would take in the neighborhood of 100 laborers if they could get them. There are two causes for the scarcity. The darkey labor is getting better paid. He only needs a small amount to satisfy his wants. So he can now work one-half or three-quarter time and rest the balance. Then the increased industries of the South have far outgrown the increased inhabitants. There is some talk in the papers about State appropriations and associations, etc., but, like all such talk, it will simply make an

office to consume the appropriations and bring nothing in return. The only effective work along this line that I know of has been by Watson at Columbia, S. C., and I think he has really done some good. We have still a good many real good colored laborers. But many of the younger ones do not want to work, are up late at night and unfit for labor.

Room and Demand for an Enormous Number of Laborers.

D. C. Lyle, general manager Atlanta Utility Works, Inc., East Point, Ga.:

We have a great deal of trouble in securing skilled and unskilled labor for our foundry, machine shops and woodworking departments. We think that there is room and demand for an enormous number of laborers in the South. The individual laborer is more efficient than formerly in the skilled class, and we attribute this to better school facilities, shorter hours, better pay, and to the influx into the South of skilled labor from the Eastern and Middle North States. The common laborer has not improved, and this is largely due to the independence of this class, being able to get a job anywhere at any time, on account of the scarcity of common labor. It is difficult to obtain good steady men in this class. We have not joined in any effort to increase the supply by bringing in foreigners or otherwise, but would be glad to co-operate in such a movement.

Know of No Efforts to Bring in Foreigners.

J. W. Cabaniss, president Exchange Bank, Macon, Ga.:

While there is some shortage in the labor supply in our immediate section, still I believe that there is labor enough in the farming districts to cultivate about the same acreage as last year. I am not very well informed as to the supply of skilled labor, though I think that is somewhat restricted also. The impression seems to be that the farming labor is probably not as efficient as it was a few years ago. I do not know of any efforts being made to increase the supply by bringing in foreigners. I do not know that I have any opinion as to what is needed to increase the supply of labor. It seems that it is very hard, if not impossible, to get foreign immigration to the South. I do not know that it is desirable, and it looks as though we will have to depend upon the present negro labor that we have on our farms. I do not know but that is about as efficient as any that could be supplied.

Favors a Coordinated Effort to Get Foreign Labor.

J. P. Stetson, president Stetson Lumber Co., Macon, Ga.:

As far as this company is concerned, we have been strictly up against it. We were working convicts up to the first of the year, but on account of their being so high we concluded not to make any more contracts for convict labor. We regret same very much at present, and are running with just about one-half a crew. The other mills in our territory are in the same fix, and if we send away to get labor it means that they have to send to some other place to replace those we took away. It used to be the case that the first of July the farmers turned loose some of their hands, but this year it seems to be different, as we do not know of any farmers having had enough labor. The skilled labor in our business is plentiful, and it is only the common labor that we are short on. The common laborer is not as efficient as formerly, owing to the fact that his wages are higher and he works less. The only effort being made to increase the supply by bringing in foreigners is being made by the A. & B. Railway, and I am informed that they have brought in some 300 or 400 Italians and located them at Fitzgerald to build their new shops and to work on their line. We will soon have to have a concerted movement toward bringing in foreign labor, as the country is rapidly building up and the demand for labor far exceeds the supply. This seems to be the case in every industry in our section. I hope this movement will soon begin, and our company is willing to join hands with others and help bring in more labor.

Shortage Due to Increased Demand.

R. A. Wood, manager Baltimore office American Luxfur Prism Co., Chicago, Ill.:

It is difficult for us to obtain cement finishers, and I believe this trouble is due to the considerable increase in the demand for such workmen, which the supply has not yet equaled.

Common Labor Seems to Be Well Employed.

Frank C. Caldwell, vice-president H. W. Caldwell & Son Company, engineers, founders and machinists, Chicago, Ill.:

In our section of the country labor of all kinds seems to be well employed. At the same time we do not think there is any serious inconvenience on account of shortage of help. The efficiency of the individual depends, of course, upon the ability and ambitions of the laborer or mechanic. While possibly there may be a feeling, more or less widespread, that there is not the same incentive to individual effort that there has been in times past, we do not think this sentiment prevails enough to affect the character of work done by the American mechanic. We believe that the supply of labor will follow the demand, and that while, of course, there will be temporary inconvenience at times, owing to the sudden increase of business in different lines, there will be no permanent difficulty in securing labor of the kind and quantity that may be necessary to keep up with the requirements of the natural expansion of the world's industrial interests. When there seems to be general prosperity, as at the present time, we think there is a tendency to look for artificial help in the labor situation, when, as a matter of fact, the natural forces that control such matters will meet the situation probably better than any other means.

Inexperienced Men Pressed Into Service.

F. C. Austin, president Municipal Engineering & Contracting Co., Chicago, Ill.:

The supply of labor is both insufficient and inefficient. The great demand presses into service inexperienced men.

No Great Incentive to Learn a Trade Thoroughly.

H. D. Savage, treasurer Ashland Fire-Brick Co., Ashland, Ky.:

As a general thing common labor in this part of the country is abundant to supply the demand, and is as good as ever. Skilled labor is limited, and not of the kind that it used to be. The change is due in part to the fact of its scarcity, which enables a man before he has learned a trade to drop into a job which he is not competent to fill by experience. Owing to this fact, there is no great incentive for a young man to learn a trade thoroughly. We believe another cause of inefficiency is the labor union, which carries a poor mechanic right along with a superior one and in many cases enables him to hold a job which if he did not belong to the union he could not hold. We believe the correspondence schools are in some measure helping to make better mechanics. Personally, we know of one or two cases where an ordinary mechanic has taken a course of some special branch with them and made himself a very efficient workman. We believe the old-fashioned apprenticeship would in some manner help if it could be

adopted and applied to the modern requirements, for a boy would then have to learn his trade thoroughly before he could get a position as a skilled man. We know of no effort being made in this section of the country to import foreigners.

Shortage Probably Only Temporary.

Richard A. Steen, secretary and treasurer Weber Steel-Concrete Chimney Co., Chicago, Ill.:

As we operate throughout the entire United States and Canada, we cannot very well state any more than to say that there seems to be a considerable shortage of labor in different localities. This seems to exist more in the Eastern States than in the Central Western States. There is also more or less of a shortage throughout the Rocky Mountain States. We could not very well answer your question regarding any way to remedy this, as it probably is a condition that is only temporary, caused by all industries being extremely active at the present time.

Regarding Employees as Interested Parties.

S. P. Grey, secretary and treasurer Indianapolis Machinery Exchange, Indianapolis, Ind.:

Our present labor conditions are due to two or three causes. First, we should have better immigration laws that would keep out so much cheap labor. Unskilled labor is abundant in this section, but skilled labor is scarce and wages high. The strike among skilled laborers has put a great many out of employment, and we think that this state of affairs has been brought about by the rigid requirements of our manufacturers. As to our own business, we have never had a strike, although employing union laborers, for the reason that we treat our men as interested parties and pay them according to their services; also allow them sick benefits and vacations with full pay. If more employers would look after these little details they would find it greatly to their interest and would have less trouble.

No Difficulty.

J. N. Parkhurst, treasurer and manager Parkhurst Manufacturing Co., Peru, Ind.:

We do not experience any difficulty in getting either skilled mechanics or common laborers. We are entirely satisfied along that line in this place.

Lacking in Sense of Individual Responsibility.

W. Hume Logan, president Dow Wire and Iron Works, Inc., Louisville, Ky.:

My opinion is that there is a sufficient number of people to do all the work required, but they seem to lack the education, energy and sense of individual responsibility. Compulsory education and the vagrancy law enforced, compelling them when children to receive a common school education and when grown to work, is in my mind the best and safest solution of the problem. Prosperity has turned the heads of the majority; the laborer is trying to live like the mechanic, the mechanic like the manufacturer and merchant, and the merchant and manufacturer like the prince. One or two years of hard times would have a good effect on labor.

Available Labor Very Unstable.

Robert Horner, vice-president and treasurer Kosmos Portland Cement Co., Louisville, Ky.:

The labor supply in the vicinity of our plant is sufficient, and business does not seem to be restricted by any shortage. However, the labor we get is very unstable, and we have difficulty in keeping unskilled men for any length of time, as they seem to be easily dissatisfied and think they can do better elsewhere, although we are paying them very fair wages. We have much better satisfaction with our skilled labor, and have no complaint to make. We do not believe that the skilled labor is any less efficient than formerly.

We ourselves have brought in a great many foreigners for our common labor, as we have found the negro labor in this vicinity inefficient, although not difficult to obtain. We had a number of Italian laborers, but have gotten rid of them, as we have found the Hungarians and Germans very much better. We believe there is abundance of negro labor, but it is woefully inefficient and hopelessly adverse to regular and steady work. We think the only solution is the bringing in of high-class foreign labor or a decided change in the negro race, which certainly is not going to be instantaneous.

Shifting of Negro Laborers.

Reuben Foster, president and general manager Chesapeake Steamship Co., Baltimore, Md.:

We have had no difficulty in obtaining sufficient number of laborers on our piers at Baltimore, but there has been for several months past a scarcity of this class of labor at Norfolk, Va. The construction of new lines of railroad in Southern Virginia and Eastern Carolina has drawn a good many men from stevedore work, and another cause for the scarcity is the preference at this time of the year of many of the negroes for work on the truck farms in that section. So far as I have been advised, there has not been any material importation of foreigners in that district.

Have No Complaint to Make.

The Sinclair-Scott Company, manufacturers of canning-house machinery, Baltimore, Md.:

We have no complaint to make as to a shortage of labor supply, either skilled or unskilled.

Lack of Proper Training an Influence.

F. R. Heym, Burroughs Adding Machine Co., Detroit, Mich.:

The labor supply we find in this section of the country quite sufficient for all demands. The individual mechanic I do not consider as efficient today as some years ago, although I think in many cases through a lack of training given in many sections of the country, the apprentice system being poor. I believe that to keep the efficiency of the skilled mechanic we need better training facilities, giving men practical experience, either with manual training schools that are being taken up by many cities or by better apprentice system in factories that are able to train men along mechanical lines.

Lack of Real, Competent Mechanics.

E. R. Fish, secretary Heine Safety Boiler Co., St. Louis, Mo.:

We have more or less trouble in getting help in our line. There are plenty of applications of men who call themselves "boilermakers," but their main qualification seems to be their ability to swing the sledge or strike the chisel, there being little intelligence back of their muscular efforts. We have no great difficulty in getting such unskilled labor as we need, but do feel considerably handicapped at times by reason of the lack of real competent mechanics. What is needed more than anything to add to the efficiency of mechanics in general is a more liberal policy on the part of labor unions in

regard to apprentices. The endeavor on the part of the unions to keep down the number of mechanics in their various trades results in a shortage of labor and the consequent necessity on the part of employers to utilize mechanics of any grade that they are able to pick up. Were there more help offered there would be a consequent incentive to mechanics to use their brains and do better work. In short, the labor unions as at present run endeavor to place the poor mechanic on a level with the good one, to the detriment of all concerned.

Able to Get All the Labor Necessary.

E. F. Lowery, president Reinforced Concrete Pipe Co., successors to Jackson Cement Sewer Pipe Co., Jackson, Mich.:

Regarding shortage of labor supply, would say that we had nothing of this experience. We have been able to get all the labor necessary in the different cities where we have been called upon to do work, so therefore we are in a very poor position to offer any solution to the question asked and which you say in your letter is so prevalent in so many parts of the country.

No Trouble About Unskilled Labor.

American Bolting Cloth Co., St. Louis, Mo.:

From our observation there is no trouble about unskilled labor. Skilled labor seems to be somewhat harder to get, but not enough so to affect any industry.

High Wages Paid a Poor Class.

J. L. Green, vice-president Laclede Fire-Brick Manufacturing Co., St. Louis, Mo.:

The labor situation here, as far as we are concerned, is not what we could wish. For a number of years we have been getting nothing but Italians, and the Americans, Irish and Germans have gradually disappeared until we now have nothing left but Italians. They are a very poor class of labor, and command as high wages as were formerly paid to good men. We believe that if laborers of other nationalities could be brought into St. Louis and mixed with this Italian labor it would very much improve same.

Ordinary Labor Plentiful.

J. A. J. Shultz, president Shultz Belting Co., St. Louis, Mo.:

We find that labor is fairly abundant here in St. Louis, and we have had no trouble in getting all the help we want, except some skilled labor. That is a little bit hard to get. Ordinary labor seems to be very plentiful. There is a great deal of street construction and street railway building, but this is done mostly by foreigners, composed largely of Greeks and the old boy knows what else.

Holding Higher-Grade Workmen Down.

E. L. Cridge, mill engineer, Passaic, N. J.:

In regard to the labor conditions in this section, I would say that the general supply is sufficient, as our close proximity to New York city enables us to get any number needed. The efficiency of the individual workman is probably less now than formerly, owing to the large proportion of the work being prepared by machinery, and to some extent by the labor unions regulating the wages of the man, and thus removing the individual ability of the mechanic and holding the higher-grade workman on the same basis with the average man. There is no shortage, and the foreigners are arriving every day, owing to the already large foreign population that is in this vicinity. To increase the efficiency of the labor there should be a compulsory educational requirement, and not depend only on a certain age limit before allowing a child to leave school.

Against Chinese Exclusion.

Columbian Rope Co., Auburn, N. Y.:

Is the individual laborer or mechanic more efficient than formerly, or less so? Less so, and more independent. What is needed to increase the supply of labor? Open this country to the Chinese.

Confidence in Investments.

Arthur Spencer, chief consulting accountant, Empire City Audit Co., New York:

I intend to deal only with the last query, "What is needed to increase the supply of labor and to add to its efficiency in order (for the South) to keep up with the rapid expansion of the world's industrial interests?" All business propositions are cold-blooded. What is the security? How much per centum will it pay? What figures have you to show? Who prepared them? Was he an independent licensed accountant or a chain-lightning calculator? Capital represents so much labor. Labor so much capital. Use what phraseology you like, it boils itself down to this. Then it is money that the South wants. Here is our old friend (new to some), "the root of all evil." The South must seek capital where capital is to be sought. Every location has its banking center, but they are, in their turn, mere rivulets to the vaults of the North. The serious fault of the Southern bank is that it is not "cold-blooded enough." Brown, Jones & Robinson start a bank. Farmer Smith or Mr. Cotton finds it a convenience and bank their profits with them. Brown will agree to loan Jones money because he is his son-in-law, and Robinson gets what he wants because he is uncle to both. Farmer Smith and Mr. Cotton stand well with the bank as long as they have good deposits, but when they desire a loan, how often is the statement made: "Must submit to my brother directors;" "have loaned all we can this month;" "are reducing our loans as much as possible." No matter what the security Farmer Smith or Mr. Cotton offers, they are turned down, although their money has oftentimes been loaned to Jones, who has 100 acres of land adjoining the city which he is going to lay out as a "residential section" when the city increases. The answer to this is that by the action of Brown, Jones & Robinson, Farmer Smith and Mr. Cotton are handicapped and the very means of increasing the residential section is cut off. Capital is notoriously timid and fearful, and occupying the highest throne in the commercial world, it is hedged about with every protection; but once enter the throne room, and gaining the confidence of King Gold, the smell of gain will make it often reckless. Now as to the natural following question, how to gain this entire and confidence, I think the following extract from the New York Sun as long ago as September 9, 1899, exploits the whole condition:

"The chartered accountant is the one valuable acquisition of many years of financial storm and disaster, but he is not as well known as he ought to be, nor as well known as inevitably he will be. Today there is a new generation, and one that is innumerable, abroad in the great speculative field. It knows nothing of the tribulations of the past, and cares nothing about them, and has all its lessons of such things to learn for itself. In the past 12 months this element has subscribed or underwritten nearly one thousand millions of capital, and is still subscribing and underwriting with no abatement of the fever. Vast, of course, will be the losses and mortal the shrinkage, but both could be

diminished—if not, indeed, controlled—were only ordinary caution observed. The investor who accepts the prospectus of a reorganization, or of any amalgamation of companies, or of a new railroad system, when the same is not supported by the certification of a first-class chartered accountant, is throwing his money away. So true is this that presently no proposal for subscription or for underwriting or for allotment that is not so reinforced and supported will fail to be at once set down as fraudulent in its nature."

Makes Work Expensive and Uncertain.

Hiram J. Slifer, construction manager J. G. White & Co., Inc., engineers and contractors, New York, N. Y.:

While we are not seriously handicapped for want of labor, we find a very definite and pronounced shortage in all lines, which makes work expensive and uncertain, and which causes a great deal of expenses in the way of shifting men from one section of the country to another. There can be little question that prosperity always tends to cause a decreased efficiency, there being no longer the same strenuous competition for work that there is during hard times. As to any efforts being made to increase the supply by bringing in foreigners, we are not familiar with any organized movement of this kind. Regarding your question as to what we believe is needed to increase the supply of labor and to add to its efficiency, that is a question which we would be glad to assist in the solution of if we knew in what direction to expend our efforts. It is a problem becoming much more difficult, the solution of which we trust that you will be more successful in finding than we anticipate being.

Cases of Greater Efficiency.

O. R. Whitney, Whitney-Linder Company, mechanical and electrical engineering, New York, N. Y.:

As we do not employ but a very few men, and at various times, it is difficult for us to answer your questions intelligently. In our opinion, the supply of skilled and unskilled labor at the present time is a little short in this vicinity, but we do not think it of such urgency as to warrant importation of foreign labor. Of course, at the present time every industry is booming, and consequently the shortage in labor is noticeable. Regarding the efficiency of mechanics and laborers, we do not think that they are so skilled in the arts as in former times, yet there are cases where high-skilled labor is more efficient than formerly.

Confining Men to One Tool.

R. E. Boschert, president Boomer & Boschert Press Co., Syracuse, N. Y.:

We think this section short of labor, and hence business is restricted. We think the individual mechanic less efficient under present conditions in the average factory, because men are confined to one class of work, or on one tool, and have too little opportunity of gaining experience in other lines. We do not know of any efforts to bring in any foreigners, and certainly would not be in favor of imported labor. In regard to what is needed to increase the efficiency of labor, we think it is a better apprentice system, whereby the apprentice would be bound for a number of years to learn the trade and the employer be bound to give him "a square deal," and both be free from dictation from either so-called organized labor or associated capital.

Immigration the Only Solution.

E. L. Propst, president and treasurer Propst Contracting Co., Charlotte, N. C.:

The shortage of unskilled laborers (about all the kind we use) is hindering and delaying business and industry beyond estimation. We think at least not less than 150,000 unskilled laborers could be placed and used at good wages in this State at the present time on public works alone, and we have no idea how many could find employment on the farms. The unskilled laborers are less efficient than formerly, especially the negroes. The only reason we can give for their less efficiency is that they receive better wages now than formerly. We think the only solution of the labor question is immigration.

Bringing in Foreigners Urged.

French Broad Granite Brick Co., Asheville, N. C.:

The situation of labor in our section is that we are short of skilled and unskilled labor, especially in regard to unskilled labor, which we find very hard to get. Consequently, business and industries are not pushing ahead as rapidly as we would like to see it. The common labor is no more efficient than formerly. Our factories and industries laboring under the shortage of help are now trying to bring in foreigners, especially "Swedes," a few of which are here now. In our opinion, the need of our section is for a good class of foreigners who will stay and thus help build up business in our numerous factories and industries. It is our opinion that if our business people will get together and try to get immigrants to come this way, especially all over the South, it would be both beneficial to them and ourselves.

Securing All Skilled Labor Needed.

H. L. Hoeffler, general manager Cincinnati Equipment Co., Cincinnati, Ohio:

We have no difficulty in securing all the skilled labor we need for our plant.

Suffering in Output.

Wm. Lodge, president Lodge & Shipley Machine Tool Co., Cincinnati, Ohio:

The situation in our section of both skilled and unskilled labor is a great scarcity of both kinds, and is by no means sufficient for the needs. We are suffering in our output because of our inability to obtain both skilled and unskilled labor. The individual laborer and mechanic are as efficient as ever, but are made so by the management. The very short time for which the bulk of them have been engaged at the business would make them less efficient, but the management by careful study and careful attention brings up the efficiency. No systematic effort has been made to our knowledge to bring in foreigners, although we notice there is quite an influx of the foreign element, due, we suppose, to the fact that positions are easy to obtain and at good prices.

Less Opportunity in Factories for Apprentices.

J. C. Hobart, secretary and manager Triumph Electric Co., Cincinnati, Ohio:

There is a shortage of labor in manufacturing lines here, especially of skilled labor. It is the opinion of the writer that, owing to the improved methods, individual mechanics are more efficient than was formerly the case. This is also due to the various methods of payment, such as the piecework and premium work, by which the workman is paid in proportion to the work he turns out. There are no efforts that we know of being made here to bring in foreign labor. The only practical way that the writer knows of to increase the supply of labor is the establishment of trade schools, where training in various branches can be given outside of the factory. There is less opportunity in the factory today for the apprentice than was formerly the case. The work

has become largely specialized, and the employer is training specialists instead of mechanics, as formerly. In addition to this difficulty is the obstacle thrown in the way by organized labor, which seeks to limit the number of apprentices in every line.

Many Men With No Desire to Anchor.

R. G. Clapp, purchasing agent Brown Hoisting Machinery Co., Cleveland, Ohio:

We are having considerable difficulty in finding men of the right quality. We have a number of applications, such as they are, but apparently are men who are looking for soft snaps or conditions that they are not likely to find anywhere. There seems to be considerable number of men traveling from shop to shop, with no desire to anchor anywhere. We are also experiencing considerable difficulty in finding apprentices enough for our various departments. In the general sifting process, though, we are able to secure practically all the men we want.

Increasing Number of Men Looking for a Living Without Work.

Wm. Hartle, manager Cleveland Belting & Machinery Co., Cleveland, Ohio:

We have had experience with hired help somewhat similar to the experience you mention of other parties. There appears to be in this section a considerable number of laboring men looking for work, but only about 2 out of 10 who are really looking for work with the expectation of giving good service to the party hiring them. We find it very hard to obtain men who are familiar with the handling of machinery. In one case which the writer has in mind at Springfield, Ohio, a party connected with us went there to load machinery, hired four men whom he found on the street, wages were agreed upon and the parties started to the plant to begin work. After walking about two blocks they turned around and started back uptown. The party hiring them asked them where they were going. They made the remark that they did not care to work. There seems to be an increasing number of men who are looking for a living without any work performed by them for same. We have in this territory a great proportion of foreign labor, but the price which they command for labor is very high compared with what they can perform. It seems to us that if it was made harder for a lot of these men of leisure to obtain a living without work that many of them would be forced to turn in and earn their living. We do not know anything else we could suggest at the present time.

Appearance of a Good Supply.

John Mackenzie, president and manager Johnson Wrecking Frog Co., Cleveland, O.:

We employ no labor directly in our business aside from the office force. Would say, however, from the general appearance of the manufacturing industry, that there is a good supply, both of skilled and unskilled labor, in the market.

Adjustment to Requirements to Come.

The Upson Nut Co., Cleveland, Ohio:

Good labor, both skilled and unskilled, is scarce in this section. We think the individual laborer or mechanic is less efficient than he was formerly. We believe this change is largely due to the agitation of labor unions for shorter hours and their influence on their members to do less work in the same number of hours, so as to make a demand for more workmen. So far as we know, there is no effort being made to increase the supply of labor by bringing in foreigners. We have no suggestions to make as to an increase in the supply of labor. We do not think this is necessary. We believe the country will adjust itself to its requirements ere long.

Recruiting Shop from Office.

A. H. Kemper, president and general manager Brownell Company, manufacturers of automatic and throttling engines, Dayton, Ohio:

We can get all of the skilled labor that we need, but the unskilled labor, especially at this time of the year, is a little scarce, on account of so much outside work being done in the city. In our opinion, the greater per cent. of the individual laborer and mechanic is more efficient than formerly, and we think this can be attributed to better schools, and especially to the mechanical department of the Y. M. C. A. and the Scranton (Pa.) Schools, and possibly to improved machinery which makes them more efficient. We do not make any effort to get labor outside of the city. In regard to what is needed to increase the supply of labor, will say, in our opinion this can be done by bringing in foreigners and schooling them, as some institutions are doing. While we believe in system, still too much of it is as bad as not enough, and we know of some concerns who have more office force than shop force, and possibly if some of these young men were given a mechanical education in the shop it might do some good to increase the supply of labor.

In Favor of Importing Labor.

John H. Camp, Camp & Carnes, Lima, Ohio:

We are very certain that not enough of your readers try to post others on the many needs presented by your most valuable journal. Hence many markets are not awakened and many good and rich regions are short of labor or capital, or both. This is all wrong, and needs more kind and frank co-operation, and all will be bettered for it. We note a great lack of good labor in many regions. This can be accounted for by our country's industries having outgrown our laboring population, and we must suffer delay and decay of business or import good, competent and worthy labor which awaits our call at but a small cost and trouble. Your writer, being an international traveler of seven years, would aid any large calls in this line. I would prefer English and German immigrants, and also some Central Africans, not negroes. In this way a large population may be added to our industries and all will be bettered. These are usually all of a kind, industrious, submissive, non-striking people. By due interstate co-operation we are very certain that these labor troubles may be overcome to the good of all and the advancement of our industries in all lines. We also note much said on the cotton-oil business. This should be pushed in these North retail markets and made a special in place of hog lard. It would soon become a standard, too, and at good prices. The hulls should go largely into fertilizers. Our people should import the Congo cotton tree and improve it to a long fiber. It grows tall and bears most prolific under cultivation, and needs no care. Your cotton-oil oleomargarine can find a large market awaiting first and second class butters in all tropical Africa. Among my old comrades it is but a matter of low or fair prices. With a fair low price in one-half, one and two-pound cheap tins millions of the people would buy and use it and pay for it in the best rubber and other equatorial goods, who now cannot get any sort of butter except a bit of the fats of elephant or hippo, and sometimes a little palm oil. Forty million people at least want our manufactured goods of all sorts, and our manufacturers should unite and demand action through our consular channels to fill this need and to employ our industries and furnish us also a new and needed class of foreign goods,

as well as a market for many million dollars' worth of all sorts of goods each year and an ever-growing trade. Our country now needs more active life and energy and less of the hold-back over-modest classes.

Laboring Men Naturally Impressed by Recent Revelations.

F. S. Culver, manager Ohio Retarder Co., Port Clinton, Ohio:

Our observation is that good laboring men and also the better class of skilled mechanics are extremely hard to get. We also notice a great change in the demeanor of laboring men and mechanics in the last few years. We believe that this letter of inquiry will receive careful attention from employers of labor, and we hope that the results of the observation made by employers may result in some real good, both to the employer of labor and labor itself. In this section every man who desires to work is steadily employed, and it is hard to secure men to fill temporary positions or to do odd jobs of work. In our estimation considerable dissatisfaction exists in the minds of wage-earners generally, and we cannot wonder at it, in view of the disclosures recently made, showing how the earnings of the producing class have been filched from them through unfair legislation, grafting in high places, and by means of the special legislation in the interest of capital. When a laboring man discovers that millions can be made by conspiracy among capitalists by unfair grafting, by rebates and making of railroad rates, by embezzlement of trust funds, by officers of insurance companies and by railroad officials accepting valuable gifts from coal-mining concerns with the understanding that their competitors shall suffer for lack of shipping and switching facilities, it is no wonder, in our estimation, that labor should feel dissatisfied. When class legislation shall be a thing of the past and fair laws enacted protecting both capital and labor in every right guaranteed them under our Constitution, we think that this matter will adjust itself.

A Mistake to Bar Chinese Laborers.

C. F. McGilvray, president and treasurer Robbins & Myers Company, manufacturers of "The Standard" ceiling and desk fans, Springfield, Ohio:

Skilled and unskilled labor are both very scarce. In our own plant we could use 20 or 30 more skilled mechanics. At the present time we have sufficient unskilled labor, but we would not have could we get the skilled labor. The individual mechanics are not as efficient as they were some years ago. We attribute the cause to the specializing of labor. For instance, in our machine shop, instead of hiring an all-around machinist, we will hire a lathe hand, a vise hand or a drill hand. They are not taught the trade thoroughly, but only one branch of it. The unskilled labor is not as good as it used to be, from the fact that we cannot get native laborers. We now have to employ colored labor or foreigners, who do not seem to care much whether they work or not. The time was when we employed a laborer and he stayed with us for years, often without any change, but it is not so at present. For my own part, I feel it is a mistake in barring the Chinese laborer from the country. From what little knowledge I have, they seem to be faithful, hardworking people. They are frugal and industrious. I believe them to be better laborers than a great many of the other foreigners which come in here. We know that they are peaceable and sober.

Unfair Restrictions Upon Employment of Apprentices.

Leon E. Thomas, manager Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.:

There is not sufficient labor to supply the demand in our territory, our output being restricted by failure to secure skilled labor. It is our opinion that the individual mechanic is as efficient as formerly. We think what is needed to increase the supply of labor and to add to its efficiency in order to keep up with the expansion of the country's industrial interests is the abolishment of unfair restrictions on the employment of apprentices by labor unions.

Italians and Huns Industrious as a Class.

B. Armitage of B. & P. Armitage, Philadelphia, Pa.:

The labor problem is in a great part dominated by the labor unions, who to a great extent regulate supply and pay, hours at work, etc. Where not affected by strikes, sufficient labor can be obtained in industrial centers. Labor-saving machinery has changed the character of the skilled mechanic, but improved his efficiency for the purpose and advanced his remuneration. The unskilled laboring class is now largely composed of Italians and Huns, who as a class are steady, industrious and sober. As in the case of the skilled, their pay has also advanced. While no conspicuous efforts are published to that effect as to obtain foreign labor, such influx serves to regulate and improve by comparison of different methods in skilled labor and an infusion of willing brawn and muscle in the unskilled laborer. As to distribution, that is governed by the pay and treatment offered.

Keeping the Opportunity for Our Own People.

W. T. Plummer, secretary Main Belting Co., Philadelphia, Pa.:

There seems to be somewhat of a shortage in the labor supply at the present time. How much of this is due to the greater demand and how much to the reduced hours we would not venture an opinion. It seems equally difficult to say whether the efficiency of the individual is greater or less. It does not seem to us that any serious effort will be made to increase the labor supply by bringing in foreigners; they come without bringing if they see opportunity. These things seem to us self-adjusting, and we believe that each one of us, whether employed or employing, has a part in meeting these conditions by keeping the opportunity for our own people.

No Trouble in Securing Labor.

Thos. L. Luders, Jr., chairman Phosphor-Bronze Smelting Co., Ltd., Philadelphia, Pa.:

We have experienced no trouble in securing labor, both skilled and otherwise, such as we require.

To Improve by Immigration.

Frank Toomey, machinery and supplies of every description, Philadelphia, Pa.:

From my observation, skilled and unskilled labor is scarce. Regarding the efficiency of labor and mechanics, I would state that I do not observe any special improvement. I should think that immigration would improve the situation.

Union Labor Prevents Higher Efficiency.

James Bonar, president James Bonar & Co., Inc., steam appliances, etc., Pittsburgh, Pa.:

As far as I observe, there is no marked decrease in the labor supply in this section, which embraces the iron and steel industry, and it does not seem that business is restricted by any shortage of labor. As to the efficiency of the laborer or mechanic, I

should say that, in line with the world's progress, he is becoming more efficient every day, due to the many channels of education at the disposal of the workingman. Union labor, in my estimation, does more to prevent a higher efficiency than anything else. It is not an uncommon thing to find a man belonging to a union being held back by his fellow-workman from putting in practice that better knowledge which he has obtained by his industrious habits, for fear of the fact that it might accrue to the benefit of his employer. As far as the shortage of labor goes, it is true that the United States some 25 years ago was badly in need of skilled labor. That was at a time when a great many of its industries were in their infancy, but the demand was very readily met by an influx of skilled labor from Europe, who realized the greater opportunities awaiting them in this country. This skilled labor naturally supplies itself, and employers take special care that the underlings are educated up to the point of being able to step into the shoes of the man above him at any time. My opinion in this matter is simply this: that as long as the world lasts there will always be sufficient hands to meet the demands. It naturally must be so, otherwise the world would stop. Improved machinery has taken the place of thousands of laborers, and is simply a part of the natural evolution of the world. It took labor a long time to see this, and they opposed it strongly, supposing that it meant that their labor would be lost, but it is not so. There is just as much work for every man today as ever, and no more. It is true that the supply and demand will fluctuate with the conditions of business, but it cannot possibly affect it to such a serious extent as to stop the rapid expansion of the industries of the world. You speak of complaints of the shortage of the labor supply in many lines throughout the country. If any industry is suffering from the loss of help, then it is the fault of the industry itself. The best thing for the industry to do is to make it encouraging for the laborer, or as equally encouraging as other lines. It might be argued that they cannot afford to make it thus encouraging. If it is a fact that it requires this impetus by paying higher wages, then it is necessary to do so, making the price of their products accordingly. Labor has everything to do with the regulation of our industries, including the cost and selling price of its production. I have a great faith in the fact that the world itself will balance up all such difficulties as you speak of.

Better Understanding Between Employer and Employee.

Willis H. Faber, treasurer and general manager Williamsport Gas Engine Co., Williamsport, Pa.:

So far as our own observation goes, the supply of labor, both skilled and unskilled, is not quite up to the demand. There is no real hardship experienced, however, because of this fact, the supplies being sufficient for the present needs. We believe also that the individual laborer and mechanic is more efficient than formerly, and we attribute this cause to a better understanding existing, as a rule, between the employer and employee, as well as the fact that the mechanic appreciates the advantages of a thorough knowledge of his business, and is acquainting himself in his own lines accordingly, while the operator also acknowledges the rights of his employee. There is an effort being made to increase the supply of labor within our own territory on progressive lines, but no effort is being made to supply the demand by the importation of foreign elements. In our opinion, the one essential thing needed to increase the supply of labor and to add to its efficiency would be for both employer and employee to recognize the rights of each and to realize that success means perfect harmony from each to each.

Negroes Living on Their Women.

William E. Hughes, president and manager Hughes Specialty Well Drilling Co., Inc., Charleston, S. C.:

The labor situation is precarious, the shortage being in most every special line of business, and also in ordinary labor lines. There are plenty of negro laborers here and throughout the South in the cities, but they won't work steadily. About two days out of the week is sufficient to support them, and that is about all they will work, as a rule. Then there are a large number of negroes being educated who refuse to do any labor at all, only taking up little odd light jobs and eking out a bare living, and content with this. Many of them do not work at all, living on their wives or women with whom they stay. This is especially a fact in the cities and towns.

We think that what is needed to increase the labor is to force large masses of the loafing negroes from the cities back to the farms, and they need industrial education, instead of classical, which they are receiving at the schools and institutions. If they were taught to farm and work intelligently (instead of cramming Latin and all other classics and social equality into their heads), they would become more beneficial to themselves and to the country at large. Very little if any attempts have been made to bring immigration here. The Southern Railway did bring some farmers from Canada, we believe, but we do not think the experiment proved entirely satisfactory, as we note a number of the people have left.

Shortage in Both Skilled and Unskilled Labor.

Geo. B. Edwards, president Metropolitan Investment Co., Charleston, S. C.:

There is in this section a great shortage in the labor supply, both skilled and unskilled, and any man or woman who is willing to work can find good employment and reasonable living costs in this section, and all kinds of industries are greatly restricted by labor shortage. There are a number of industries who are so anxious to obtain additional labor that they would be willing to employ unskilled labor and teach them to become skilled workers. We also know of several large manufacturing enterprises that would have been located in this section had it been possible to obtain the necessary supply of labor.

The individual mechanic is just as efficient as formerly, but in this section, as elsewhere, there is always a wide range in the skill and efficiency of the men, and there is a great need of and plenty of work for a large number of carpenters, plasterers, bricklayers, machinists, boilermakers and all kinds of skilled workmen, as well as unskilled workmen and laborers, not only in this section, but everywhere in the South.

There are many efforts being made to increase the supply, but these efforts are disjointed and are put forth in so many different ways as to have produced little or no results. In our opinion, what is needed to supply an increase of labor is an active and persistent propaganda, such as the MANUFACTURERS' RECORD has been engaged in for years past; a veritable campaign of education informing every section of this country of the opportunities for work for everyone in the South, and in addition to this a well-organized and extended effort must be made to inaugurate a campaign of education in Europe, as it is a well-known fact that the immigrant before he leaves Europe has fully made up his mind what his destination is to be in this country, and when he arrives at Ellis Island immigrant station, New York, or any other seaport in this coun-

try he cannot be turned from the point to which he is destined, but when once in this country, should his destination prove unsatisfactory to him after he has tried it for some months, he might then be induced to go South if the advantages and opportunities of the South are properly put before him. One serious question that appears to us, however, is that at the present time the wages in the South are not as high as they are in the West, where most of the immigrants now go.

The agricultural opportunities in the South, however, are so inviting as compared with other sections of this country that well-directed propaganda in European countries setting forth the advantages of the South as a permanent home for the settler should in time bring a large farming population to the South, from the families of which all other industries can draw their labor supply, just as they have done heretofore.

Have No Difficulty.

Benjamin F. Taylor, manager American Press Cloth Co., Columbia, S. C.:

We operate with skilled labor. Our plant is small, and we have no difficulty in getting competent help, which has been trained to some extent in the cotton mills of this city. Our labor is efficient, and we find they would rather work in our plant than in the cotton mill.

Where Increased Wages Reduces Force of Labor.

Gadsden E. Shand, Shand & Lafaye, engineers and architects, Columbia, S. C.:

The labor supply in the Piedmont section of this State is insufficient to properly carry on the developments and manufacturing that is in progress. The labor supply in the South is increasing practically from natural sources only, there being no immigration to speak of. Other sections of the country absorb in their manufacturing and public works the immigrant labor, and in this respect they are having a great advantage over the South. This labor enables those sections to build up rapidly, while our developments are restricted by the scarcity of labor. When we consider the large increase in all manufacturing enterprises, especially in cotton mills, the great demand for labor caused by the large increase in the number of saw-mills that the recent high price of lumber has promoted, the considerable number of large water-power developments that are being carried on and the public improvements in the cities and towns, it is a wonder to us that the scarcity of labor is not felt even more than it is.

The great scarcity of labor is in cotton-mill operatives and for those laborers who handle the pick and shovel. Ten years ago the common day laborer earned 60 cents a day. This price has risen to 75 cents, and then to \$1 and \$1.25, and in some instances to \$1.50 in this section. The average darkey will work no longer than is necessary to earn a living. He can, consequently, earn as much now in three days as he formerly did in six. The result is that the supply of labor has been actually decreased by the increasing wages, the darkey now working a less number of days each week than he formerly did. On several of the large water-power developments gangs of Italian laborers have been brought down from the North, and it looks now as if no very large work can be carried on to rapid completion in this section without some such importation of laborers. We see no remedy for this condition of affairs except to bring in laborers from other sections and to pay such wages as is necessary to induce them to come.

Immigration Bureau's Work Hampered.

B. F. Taylor, secretary and manager Taylor Manufacturing Co., oil-mill department, Columbia, S. C.:

There is a considerable shortage of both skilled and unskilled labor around this city and throughout the State. There is not sufficient for the needs of the planters, and there is quite a shortage of laborers of sufficient intelligence to take positions in the factories. Business and industry are seriously restricted by the shortage. The individual laborer is less efficient than formerly. As is well known, our laborers for the great part are negroes, who only have to pay a house rent of 50 cents per week, and whose food, as a rule, costs no more than \$1.50 per week. Their clothes, for the most part, are the cast-off garments, which they either get for nothing or for which they pay a very small sum. A negro laborer lives as well as he cares to live on about \$3 per week. If he has to work six days to get this sum he will do the work, but if he can earn this amount in three days, as is now the case, he will knock off for the balance of the week. We attribute the cause of our trouble to the fact that the negro, as a rule, takes no thought of the future, and lives only for the present, and that high wages with such a class is demoralizing. In addition to this, the great majority of the cooks in the South feed their husbands, families and friends by what they can steal from their employers. So general is this state of affairs that it is accepted by the employers as a condition they are unable to get around at present. This also tends to make the men worthless.

This State is endeavoring through its bureau of immigration to supply us with foreign labor, but the efforts of the bureau are hampered by the law requiring that immigrants only of certain classes and nationalities be solicited for this State. We are in need of all classes of foreign labor who will work, whether mechanics, farmers or laborers. For our purposes we would like to have a laboring class like the coolies of India or the fellahs of Egypt, who are methodical, steady workers, accustomed to living on cheap articles of food and to receiving small compensation for their work. The reason we mention the price of this labor is that in our particular industry the cost of working has been steadily advancing without a corresponding advance in the value of manufactured products, and it is necessary for us to get our working cost down as low as possible. We actually cannot pay present prices for labor and make a satisfactory profit.

Unsatisfactory Dealings With Foreign Labor.

Thos. F. Davis, superintendent Killian Fire-Brick Co., Killian, S. C.:

The situation in our immediate neighborhood is very serious, with no very satisfactory solution in sight. We have recently gotten, through out State commissioner of immigration, a mixed lot of foreign laborers, but in view of the fact that their transportation has to be advanced from New York and a per capita paid to agents there for collecting them, without any legal protection against their leaving before this transportation is refunded, this method is far from ideal. Negro labor, upon which the South has so largely depended, has become inadequate to meet the increasing demand, and the character of this labor is such that the advanced wages now, as compared with a few years ago, tends to make them more indolent and worthless than ever before, inasmuch as they lack ambition as a general thing, and advanced wages simply means that fewer days' work are necessary to supply their current needs. Importation of foreign laborers seems to be the only solution, and while conditions along this line are

far from satisfactory, the business is just begun, and as soon as taken in hand more generally by the various States and laws are enacted which will protect employers against loss in the heavy outlay necessary, there is no reason why this class of labor should not be brought in in abundance.

Cotton Mills Especially Hampered.

A. M. Law & Co., stocks, bonds, insurance, Spartanburg, S. C.:

We hear on all sides complaints as to the scarcity of labor in all lines and the prices demanded by both skilled and unskilled help. These conditions, of course, indicate unusual shortage. The cotton mills most especially are hampered by the lack of help; in some instances a large proportion of the machinery of the mills stands idle. In our opinion, the South will surely have to bring in foreigners for all classes of work within a very short time, as it seems impossible for the supply of native help to fill the unusual demand.

Great Scarcity of Common Labor.

A. H. Chapman, secretary and treasurer Walsh & Weidner Boiler Co., Chattanooga, Tenn.:

There is a great scarcity of common labor in all lines of manufacturing in this city and roundabout. The manufacturing industries are greatly handicapped, owing to this shortage of common labor. Wages have been increased from 25 to 50 per cent. on common labor, and after this increase it is our opinion that the laborers do not do much more than half the work they used to do before the increase was made.

Efforts for Immigration Restricted.

Robt. Yancey, manager Georgia Warehouse & Brokerage Co., scrap iron, metals, bones, etc., Knoxville, Tenn.:

Being only newcomers, we are not sufficiently versed in this section's needs to render you an accurate account of the labor question. We do not know, however, that the efforts for bringing in foreigners are restricted as yet, and we believe that a movement of this kind would meet with a hearty support of all business interests around here, particularly among the contractors.

Strictly Enforced Stringent Vagrancy Laws.

Lucius P. Brown of Lucius P. Brown & Co., analytical and consulting chemists, Nashville, Tenn.:

I am more closely connected with the phosphate business than probably with any other in this district. The situation as regards labor in that business is bad. We use mainly unskilled men, and they are very hard to get, while wages paid are higher than ever before. Development is hampered by this scarcity and costs increased. So far as the average labor of the country is concerned, we are dependent almost entirely upon the negro. It is certain that he is growing less efficient yearly. A lumberman phrased the matter about as well as it can be put to me recently by saying that formerly the negro could get enough to live on by working three days a week; now he can effect the same results by working only two days a week; consequently, his efficiency is diminished one-third. The best thing that can be done to correct existing conditions would be stringent vagrancy laws strictly enforced. This would tend to impress upon the darkey the necessity of labor and force him to take advantage of such opportunities for learning as may be thrown in his way.

In my opinion, also, compulsory education laws are more necessary for whites than for blacks. As a usual thing the darkey runs after book learning and wishes to become a lawyer or a doctor, when there is no call for such professional men, to the detriment of supply of skilled and common labor, and I have often seen the mothers going in rags and eating offal in order that the children may get a little education. I regret to say that the reverse seems to be true among the poor whites of the South. Since industrial development began in this section this class of people follow industrial works around, raising children who get no education and apparently desire none. The education the negro gets does him no good, and apparently simply makes a fool of the majority. What he needs more than anything else is moral progress. As a usual thing the race has no regard for its spoken word, and there is no means of enforcing a contract made by one of its members. Of course, this will in time correct itself. If I did not believe it I would move out of the South tomorrow. But I believe it can be hastened by discouraging Latin and Greek and encouraging the hammer and the hoe. Some owners of industries in this section have imported Italians, but the experiment is of such recent introduction that no tangible results have as yet arisen. I fancy that, in default of the negro, which is the best labor we have when it can be induced to work, the Italian of Northern and Middle Italy is our best chance for labor.

Almost All Concerns Hampered.

Vestal Lumber & Manufacturing Co., Inc., Knoxville, Tenn.:

There seems to be a sufficient supply of skilled labor in our section, but the one blot and drawback to our present prosperity and development, however, is the shortage of unskilled labor. Almost all concerns are being restricted in their output on account of this shortage, and there seems to be no effort or plan being formed to increase the present supply. As we look at it there is only one solution to this problem, and that is, by bringing in foreigners to increase the common labor supply, as has been done in the North for years back. Unless something of that kind is done the development of this section will be seriously affected.

Inclination to Treat Jobs With Indifference.

A. H. Galland, superintendent Powhatan Clay Manufacturing Co., Clayville, Va.:

The labor question with us has been about the same as the past two seasons. Our force is made up of about 75 per cent. colored labor and the balance white. Amongst the colored help we have experienced the usual desires to change their location, and a good many of them left us to go to Northern and other cities. To take the place of these we have been able to secure enough of the same class, but they have been younger and inexperienced. The general supply of labor has been just about enough for our needs, with an occasional shortage only, and no efforts have been made by us to bring in any foreigners. As to the efficiency of the individual laborer, we think that he is less efficient than formerly. We attribute the change to the abundance of work all over the country and the inclination on the part of the laborer to treat his job with indifference on that account.

Not Encouraged by Italian Labor.

S. Milnor Price, president S. M. Price Machinery Co., Inc., Norfolk, Va.:

We are dealers, and, consequently, don't employ the kind of labor that you want information on. We do most of our business with the lumbermen in this section, and

we hear complaints on all sides from them of the scarcity of labor. We know of some that have tried Italian labor, but without much encouragement. The best labor that they command is the negro, whom, if he would only work steadily, would relieve the situation greatly. Further than this, there is nothing that we can tell you, and we feel that we are possibly superfluous.

Foreigners for Farmers.

W. P. Ruffin, Danville Wagon Co., Danville, Va.:

We think that the labor in our section, both skilled and unskilled, is very scarce. As a whole, business and industries are restricted by the scarcity of labor. Efforts are being made to bring in foreigners for farmers, but not as laborers.

The Decline of the Negro Laborer.

John W. Hays, civil engineer, Petersburg, Va.:

The situation is bad. Through the past 12 months I have been engaged chiefly in middle North Carolina in municipal works, as supervising engineer for various towns, and although higher wages were offered than the negroes had ever before known, they were most irregular in reporting for duty and most indifferent when present. Negro bricklayers had been receiving \$2 per day for a generation. We offered \$3.50, and could not get more than 900 brick laid in 10 hours, when 2500 would have been a reasonable day's work. "I don't care if de boss do fire me," I overheard one remark; "I can step out and git work any hour I want!" We were paying \$1.25 for common labor, when they had never before received more than 90 cents. But the higher wages paid the less will the negro work. He only wants \$2.50 when Saturday night comes. Of this sum \$1 goes for necessities, \$1 to some woman, and 50 cents for whiskey for the two. Common labor seems to be in greater demand than skilled labor, but there is shortage all round. Business in some places is greatly restricted and almost at a standstill by reason of this shortage of common labor. I cite specifically the large railroad construction.

Both the individual laborer and the mechanic are less efficient. I attribute the change chiefly to the negro's want of thrift and to his want of discipline in youth. In 1879, when I first directed negro laborers on railroad construction, I worked chiefly those who had been slaves and had served apprenticeship to the whipping-post. They were good laborers; steady, regular and attentive to instructions. Fifteen years later I was working the children of slaves, and the deterioration was well in evidence. Today we are trying to work the grandchildren of slaves, who never knew discipline either by contact or by hearsay, and the limit is reached. Important work can no longer be executed with this labor. A contractor can make no estimates as to time or cost. Our loaded wagon is in the road while the team has laid down. A different team must be had or the load abandoned.

In both North Carolina and Virginia efforts have been made to increase the supply, but I fear the necessary funds are not available to do the needed work in thorough and systematic manner. No cheese-nibbling, halfway effort will accomplish anything of moment. We want immigrants to do our work, but I am most pronounced in opposition to the South Europe sort. If we cannot get immigrants who will make Americans and become amalgamated with the native stock in reasonable time, let us shut down and leave the wagon in the middle of the road. We have enough race problem now, without complicating it with Italians, Hungarians, Poles and Russian Jews. We have just passed through the fire of social disorder extending over 40 years. We have solved our problem, and now want rest from this social vexation. Give us the co-operation of employers, railroads, steamship lines and the several State organizations, and there should result the immigration we need and most desire. But to get results from these requires money and men of ability. Men who have never made a success of their own business are not likely to make a success of somebody else's. And a man who has made a success of his business is not likely to be had for the asking.

Industrial School Needed.

Charles Ranney Dewey, architect and engineer, Richmond, Va.:

Laborers of all classes are scarce in this vicinity. Irrespective of class, efficiency is as in years past, but as the city increases in size and importance commercially the demand for the best class of skilled mechanics, of course, is greater, and it is more difficult to satisfy the demand. There has been some talk of bringing in foreigners, but very little has been done as yet in this direction. The greatest need for this city in the solution of the labor problem is an industrial school to train mechanics for the building arts. This school should be conducted in such a manner that in the winter months or quiet seasons the mechanic could augment his knowledge of drawings and methods of construction.

Draining the Country.

John A. Selph, proprietor Southern Pipe Covering Co., Richmond, Va.:

We think that in the city our labor supply meets the demand in practically all lines. We can very readily observe that there is a shortage of labor throughout the country, which works hardship or a disadvantage to the farmer; that seems to be the only class of people who have occasion to complain of labor shortage. The writer believes this is somewhat due to the young men leaving the country for college or other educational institutions, and after living in the city for a while they begin to like city life and secure positions, instead of returning to their country homes.

For Selection of Right Kind of Immigrants.

W. C. Kelly, president Kelly Axe Manufacturing Co., Inc., Charleston, W. Va.:

There is quite a shortage of both skilled and unskilled labor, and business is much restricted thereby. We think this answer applies to all sections of the country as well as this section. We are strongly impressed with the fact that both laborers and mechanics are less efficient than in former years. We think this is attributable to several causes. The shortage in the supply of skilled labor forces manufacturers and others to take what they can get, and the results are a more inferior grade than in former times, when the supply was adequate and the buyer of labor could be more particular in his discriminations. In former years, when it was more difficult to get employment, men were compelled to serve an apprenticeship or use some influence to get a position that was more highly prized than it is today, and hence the position would be held to more tenaciously than it is today, and men would not change around so much. At the present it is so easy to obtain employment that men are constantly changing from one place to another, looking for easier positions, and thus they do not become efficient as they did when employment was more difficult to obtain, and when obtained was more highly prized, and with less disposition to change.

Our public educational system of the country has much to do with this troublesome

question in this respect, that formerly the young generation growing up were willing to go into the trades and accept an apprenticeship and learn some trade, whereas today, with the liberal wages that are being paid, men send their children to school for longer periods and keep them out of employment, and hence when they grow up better educated than formerly they seek the professions and light employment, avoiding the trades that require manual labor. The craze for higher education is undoubtedly destroying the growing-up generation for industrial employment, and if it was not for the foreign immigration that is coming to this country the industries in the United States could not be carried on, as Americans will not go into these industries, as a rule, for employment.

Owing to our laws making it a serious offense to contract for labor abroad, efforts cannot be made by manufacturers and others to seek labor in other countries. Foreigners, principally of the laboring classes, are coming to this country in great numbers, as is well known, yet not in sufficient numbers to supply the demand for the great increase in our industrial growth. We believe it would be better for the country at large, and the industries of the country, and the future citizenship of the country most particularly, if, instead of our present immigration laws, they were amended to shut out certain inferior classes which are coming to this country in great numbers, and permitting manufacturers and others to go abroad by their agents and solicit laborers and mechanics of the right kind which would preserve a high grade of citizenship. Men could be thus obtained best adapted to the particular industry for which they are required, and a higher grade of citizenship could thus be preserved by shutting out undesirable classes and bringing over the desirable classes that are much needed.

We believe you have put to your readers a very important question, and the labor question confronting this country is certainly a very grave one at the present time. Our immigration laws were probably made at a time when the full effects of the same were not thoroughly understood as they are today. We believe it a very shortsighted policy for any class of citizens to oppose a good class of immigration coming to this country. Men are needed badly throughout the entire length and breadth of the country, and we should have some wise laws allowing us to go abroad and obtain the kind and quality of men we need, and not leave it to chance to get the scrapings of Europe, as we are doing today. Bad as it is, however, the country would have to suspend business if it was not for this foreign supply, and nothing should be done to stop it until we could improve the method for obtaining them, but that a better method of obtaining them should be inaugurated as early as possible is a question of vital interest to the welfare of this country.

Foreigners of Today Will Not Work Steadily.

J. F. Healy, general superintendent Davis Coal & Coke Co., Thomas, W. Va.:

We are short of all kinds of labor, especially miners. The labor we have is less efficient than formerly, because men have not been trained to work properly. The great bulk of laborers nowadays are foreigners. This was perhaps always the case. But the Irish, Scotch, English, Welsh and Germans, so much in evidence years ago, often had some training, soon learned to speak American and rapidly learned American customs; in short, soon became more American than the Americans themselves. The present foreigners will not work steady. They drink too much beer. In time they will become good citizens, like their predecessors. No special efforts are being made to increase labor supply.

Independence in Mechanics.

E. A. Werner, president and general manager Southern Saw Works, Atlanta, Ga.:

We do not employ many laborers, so we are not much affected by any shortage. However, we would say that skilled labor here is insufficient for our needs, and our business has been restricted during the last six months on that account. We particularly refer to sawmakers. We have been advertising all over the country during the last month, and have had very few replies, and have not succeeded in filling our anvils. In regard to bringing in foreigners to supply these demands, the writer has not heard of any organized effort in or around Atlanta. In my opinion, this is what should be done in order to give us good labor conditions. The mechanics seem to be in general of the opinion that they are the only people that we can get; therefore, do just about as they please. Until we can bring in other workmen to compete with them there is not much chance of increasing our business or making the working force more efficient.

For Better Schools and Better Provision for Comfort of Employees.

J. E. Creary, president Corinth Engine and Boiler Works, Corinth, Miss.:

In our immediate section the supply of unskilled labor is hardly sufficient to meet the present demands, and of the skilled labor there is a decided shortage, and business is to that extent restricted. The individual laborer or mechanic is more efficient than formerly, and we attribute it to the fact that all business methods have improved, the educational facilities are better, and the incentive to do more and better work are greater than ever before. Besides this, the energy and push that is being displayed along all lines by employers of labor have been unconsciously communicated to the employees, and they have become more valuable as a result. There is no organized effort being made to supply the shortage of labor. What is needed to increase the supply and add to its efficiency is the offering of greater inducements to immigration, more and cheaper industrial and technical schools, better provision for the comfort and convenience of the employee and the inculcation of the idea that honest effort will be appreciated and rewarded.

The Draining by Higher Education.

James H. Norris, business manager John F. Allen, portable pneumatic riveting machines, etc., New York, N. Y.:

Our plant is running shorthanded, simply because we cannot find suitable machinists to engage. We could employ 15 per cent. more labor. Young help professing to be skilled is more or less abundant, but a few days' experience with them demonstrates that it is better to be without them, their poor work bringing down the standard of the shop, while it is a constant worry keeping after them explaining how to do the work. Mechanics do not seem to be up to the standard of a few years since. Why it is we cannot explain, unless it is that they do not feel the same interest in the work as heretofore, much of this spirit being bound to arise from the continual strife for more money and shorter hours. Individually we are not attempting to bring in foreigners, and neither do we know of others doing so. We have two Danes, brothers, one being in this country only five months and this his first job. They are excellent workmen in every respect, and we wish we had about 20 more like them. Their work is good, they keep right at it, are satisfied and sober. We also have two Russian Jews who are satisfactory, and we would engage others we do not for fearing that it might create dis-

sension among the other men, who are not friendly disposed toward them. It does not seem as though this country is producing sufficient labor to operate its industries, and if the latter increase as they have been doing matters are bound to become worse. Education is taking many into the higher lines of livelihood who formerly were content with industrials. In many instances the returns are not as remunerative, but the life is not as laborious. If the same is to continue we must look to foreign countries to supply the deficiency, it being most doubtful that it can be met with here in any manner whatever.

Held Back by the Labor Unions.

J. L. Huston, manager Champion Saw Co., Beaver Falls, Pa.:

The labor supply is not overcrowded either in skilled or unskilled. Skilled labor is rather short than otherwise. As to the efficiency of individual labor, would say that we can see no great change over what it has been in the past. There is no effort being made to supply any shortage of labor for this particular point by bringing in foreigners or otherwise that we know of. Our opinion of the efficiency of labor is that it is held back rather than assisted by the labor unions, owing to the fact that apprentices are restricted. Trade schools might be of some use if the graduates were not above beginning at the beginning.

Attractive to the Foreigner Seeking Employment.

J. L. Considine, assistant secretary Petroleum Iron Works Co., Washington, Pa.:

We have little difficulty in securing unskilled labor, as the large mills of the Pittsburgh district are always attractive to the foreigner in search of employment. The demand for skilled labor is as active as ever, and the prospect of supplying this demand not very promising. In the efficiency of the individual laborer we see no material change in the unskilled class. This can be accounted for to some extent, as the class is composed mostly of foreigners, and their unfamiliarity with the language and customs of the country is quite a handicap. As a large portion of our trade develops in the South and the Southwest, we are always interested in the welfare of this section, and we sincerely hope that the trend of labor will be diverted in your direction and relieve the South of its present difficulties.

For the Proper Training of Boys.

Samuel H. French & Co., paint and varnish manufacturers, Philadelphia, Pa.:

We have had little or no trouble from shortage in labor supply. We attribute this to the fact that a large percentage of our employees have been with the house for many years, are well contented and thrifty. We think the above remarks will largely apply to the better class of skilled labor in this city. In our own establishment the individual laborer and mechanic are more efficient than formerly, owing largely, if not entirely, to their long and continued service with us. In our opinion, what is most needed to increase the supply of intelligent labor and to get the best results is to do away with the system that limits apprenticeships and to extend every facility for a proper common school education, and, if possible, to give boys of the coming generation a manual training, and at the same time teach them to respect not only authority and law, but their fellow-men.

Necessity for Systematic Effort to Secure Labor.

Chas. Loeb, secretary Charleston Chamber of Commerce, Charleston, W. Va.:

I have addressed communications to some of the leading manufacturing industries in Charleston, and have replies from several. From these it appears that neither skilled or unskilled labor has been sufficient for the needs of manufacturers here, and that there is a very crying necessity for systematic effort to procure labor. One of the concerns to which letters were addressed has made several very practicable suggestions, which, however, are of a local nature.

Better Class of Labor Being Educated.

Wm. Farr, president and general manager Piedmont Electric Co., Inc., Asheville, N. C.:

Our experience with the unskilled labor situation in this section is somewhat limited. We believe, however, that the supply for present needs is ample. First-class mechanics and skilled labor in general is hard to get. The rapid industrial development in this section, however, is tending to educate the better class of labor, which will to a certain extent relieve the shortage. We can never have, however, too much skilled labor.

Mechanics Not Thoroughly Trained.

S. J. Young, assistant manager P. B. Miles Manufacturing Co., Jackson, Mich.:

In some cases the individual laborer or mechanic is more efficient than formerly, and yet there is a large number of mechanics that have not even learned one-half of their trade and are posing themselves as first-class mechanics. They start out as apprentices, and after about two or three years' work in the machine shop they think they have learned all there is to be known and class themselves as first-class mechanics. These men are a detriment to the business. We find here a shortage of labor, both skilled and unskilled, and for that reason business is restricted to a certain extent by the shortage. In this locality I do not think there are any efforts being made to increase the supply by bringing in foreigners; if there is, I do not happen to know of any. In my opinion of what is needed to increase the supply of labor and add to its efficiency in order to keep up with the rapid expansion of the world's industrial interests, the first thing that I think of is to show to the young men of today the possibilities along this line, and instead of advising them to take up some so-called profession, such as doctor, lawyer or instructors, interest them in the industrial world, civil engineers, mechanical engineers, etc. This, I think, will increase the skilled-labor question. Unskilled labor will be affected by the rapid increase of foreigners in this country.

"Social Standing" as a Drawback.

E. A. Bostrom, president Bostrom-Brady Manufacturing Co., Atlanta, Ga.:

In our line of work it is very difficult to get help in the South that is sufficiently skilled to do the work properly, and when we find them we cannot rely upon them to remain steadily at work. The young mechanic of today is not as efficient as mechanics used to be for two or three reasons. First, there is such a demand for help that the usual apprenticeship idea is wholly lost sight of, and shops hire anything they can get hold of, and as soon as you teach a young fellow to do something some other shop wants help, he goes there and gets a better offer and off he goes, and then when the young fellow has beat around in this way for four years he joins the union and demands full pay, whether he knows much or little. We believe there is some effort made to bring skilled help from other sections of the country. We ourselves are getting help from the East.

Our opinion as to what is needed to increase the supply of labor and add to its efficiency, etc., might be made a long story, but to be brief, to us it seems that commercialism and social standing play a large part in the attitude of the Southern young man toward labor and learning a trade. So long as there is a decided preference shown socially in favor of the young man who stands behind the counter and the man who works at a trade, and the earning capacity about equal and sometimes in favor of the commercial line, so long a young man thinks himself a fool to spend his time learning a trade, when simply by learning how to part his hair in the middle, keep it shiny and smooth and wear a standing collar he can earn \$75 a month buttoning shoes on a lady's foot and have social standing, while if he learns a trade he would only make \$2 to \$3 per day at best and have no social standing. So what is really needed is to have a higher estimate put on labor, the value of labor increased and a higher standard of quality and ability exacted of the workman. This will come in time, but not until the laboring element assume a brighter hue and the dark clouds of manual labor that now hover over this fair Southland are scattered, the social element of the mechanic uplifted to the height where it belongs, and the intelligent and skilled workman put on the equal with the salaried man. Yet this may never be accomplished as long as the age of commercialism lasts.

PORT ARTHUR'S PROGRESS.

Mayor J. H. Drummond's Enthusiasm For His City.

[Special Cor. Manufacturers' Record.]
Port Arthur, Texas, June 15.

In discussing with me the progress of Port Arthur Mayor J. H. Drummond, after illustrating by a practical description that 10 acres of Texas soil will suffice to not only to live on, but to live in regal splendor, and having made the assertion, which he backed up by statistical data, that there is room today in Texas for 1,000,000 more homes, said:

"Port Arthur's future is firmly fixed. The truth is that there never was a doubt about it except as to time. Many a man plants a tree from which he never lives to pluck the fruit. It was a question whether the first purchasers of lots out on a bald prairie would live to reap the harvest that was sure to follow some time, sooner or later. The settlement on Sabine lake will yet, I have no doubt, be pointed to as an object-lesson. Less than 10 years ago a crew making the trip from Beaumont to Sabine Pass would have been considered a wise old bird to have carried a haversack of corn with him. Less than a half-dozen years ago, perhaps, so wise an old statesman as our friend Senator Chauncey Depew spoke of us (the city of Port Arthur) as the 'cow pasture.' Were the illustrious after-dinner speechmaker to visit us today he would have to approach us through an unbroken string of rice farms, truck gardens and an intervening village or two between here and Beaumont.

"Beaumont itself might have been his first cause for wonder, springing from about 6000 people in 1900 to a splendid city of near 25,000 in 1906. Yet still greater wonders would have been in store. In the whilom camping grounds of the 'long horn,' to which he made reference in his eloquent speeches in the United States Senate, he would have found a hundred sky-aspiring masts arising from ships that dare the high seas lying there in that self-same place where the bovines were won't to repose.

"As regards the future of Port Arthur, perhaps more has been done within the past month to give assurance to the outside people than anything heretofore accomplished. If the port of entry bill, carrying with it the transfer of the present channel and slips, shall be passed and become law, then every obstacle will have been removed and Port Arthur will surely grow into one of the principal cities of the Gulf coast. We can already feel the pulsations of the coming expanding force."

Mayor Drummond is one of the most popular public men in Southeast Texas. The law and order element is as active in his support as the saloon people. His administration is maintained on strictly ethical lines. He has spent 16 years of his life in Port Arthur, and has lived to see it grow from a few houses to a promising

*Since this was written Port Arthur has been made a port of entry by Act of June 19.

Gulf port. Prior to locating at Port Arthur Mr. Drummond spent 14 years of his life as proctor and secretary of the board of curators of the Missouri State University, Columbia, Mo. JOHN BANNON.

WORKING FOR VICKSBURG.

Newly Organized Business League in This Growing City.

[Special Cor. Manufacturers' Record.]
Vicksburg, Miss., June 22.

The Business League, which was recently organized here, has secured the services of J. P. Adams as secretary and manager. Mr. Adams comes from New Orleans, La., where he has been closely identified with the upbuilding of that city, as well as many private enterprises there. Vicksburg is enjoying its share of the growth and general prosperity of the South, as is evidenced by a large increase in population, bank clearances and post-office receipts. There are a great many new buildings going up, notably a large modern eight-story steel office and bank building. The Mississippi Home Insurance Co. will soon commence the erection of a 12-story steel office building on Washington street. There are many smaller business houses and a great number of residence buildings. The city is extending south. The lines of the National Park do not come so close to the limits on the south, and has left quite a large territory for the city's further growth in that direction.

There has recently been passed the necessary ordinances for paving and sewerage extension. Specifications are being prepared, and bids will soon be asked for. It is proposed to put all wires under ground and compel property-owners in a prescribed limit to destroy all old wooden shacks. These improvements will add greatly to the appearance of the business section of the city. As for the resident section, Vicksburg has many beautiful and stately homes, beautiful streets and driveways. When the National Park roads are completed they will afford a drive over the historical battlefield of more than 50 miles.

Vicksburg is in the center of the richest cotton section of the United States. It is the home of the long staple. Only a few days ago 100 bales of cotton sold here at 20½ cents a pound. Vicksburg is in the heart of a great hardwood timber section. It offers special advantages to manufacturers in both textile and wood. Drawing a circle with a diameter of 500 miles, using Vicksburg as the center, one will observe that it is the largest city within that scope of territory.

The Finnie Dry-Dock Co. of Paducah, Ky., has decided to remove its docks to Vicksburg. These docks are sectional, with capacity of lifting a boat 52x160 feet and barges 190 feet long. They will arrive in Vicksburg about July 15, and the steamboat owners are looking forward to this with interest.

In addition to its present railroad facilities, Vicksburg has the great Mississippi and Yazoo rivers, with their numerous

tributaries, traversing the richest section on the globe. These natural waterways afford means of transportation and cheap rates, with all the natural advantages a city could wish for. Vicksburg now only needs the capital of the investor and the hand of the artisan. The Business League will gladly furnish any information regarding Vicksburg and its environments at any time.

IMPORTING SWEDISH ORE.

The Increasing Cost of Foreign Iron Ores.

Two steamers arrived at Baltimore this week with aggregate cargoes of 9280 tons of Swedish iron ore, shipped from the port of Narvik, Norway. This is the first ore of these Swedish mines received in America. It is of exceptionally high grade, analyzing about 69 per cent. The ocean freight was \$2 per ton.

In addition to these two cargoes received by the Maryland Steel Co., it is understood other steamers will shortly arrive with similar ore.

The tendency in the foreign market is to a much higher range of prices than formerly, which would indicate that the competition of foreign ores with American ores will gradually grow less. This advance in foreign ores' cost at the same time causes a large increase in the cost of production of iron and steel in Europe, putting the cost of foreign steel more nearly on a parity with American steel than in former years. Quotations recently made for Mediterranean ore, averaging only about 50 per cent. iron, intended for importation for this country, range from \$1 to \$1.50 per ton higher than last year when contracts were made with the same mines.

The rates of freight on Mediterranean ore have continued about the same for the last 12 or 15 years, but the decreasing supply of Bessemer ores and the increasing cost to which iron has repeatedly been raised has brought about this advance of from \$1 to \$1.50 per ton in the selling price of Mediterranean ore at the mines, which means an increase of from \$2 to \$3 per ton in the cost of ore per ton of iron.

It is generally recognized that there is a growing shortage in the world's known supply of Bessemer ores, and the tendency today is very pronouncedly towards the use of known Bessemer ores for basic steel-making. This is seen more generally in Europe and in the South, but in the plants of the United States Steel Corporation, when preparing to build new plants, the open-hearth or basic system is to be largely utilized.

The Iron and Metal Trades.

The Iron Age in its weekly review says: "Somewhat conflicting reports are at hand concerning the foundry pig-iron situation. So far as can be learned, the leading Southern furnace interests have sold to a few large founders an aggregate of from 100,000 to 125,000 tons for early and forward delivery, with some additional large business pending. It is asserted that in some instances a moderate further concession was granted. From all the markets come the report of quite a considerable number of sales of smaller lots of Southern iron for fairly prompt delivery at better figures than those realized on large long-time contracts. In the different competitive markets where Southern irons meet metal produced in Northern districts the latter have not come down to parity, the impression being that the amount of iron which Southern furnaces can or will sell is not large, after all, and that the flurry is practically over. The Tennessee and Republic companies announce officially that the system of quoting foundry iron on the Birmingham basis has been abolished."

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Building at Memphis.

[Special Cor. Manufacturers' Record.]
Memphis, Tenn., June 25.

The summer season is seeing a large amount of construction work in the city of Memphis and that tributary section to the city that is sometimes termed the Memphis district. This means an outlay of thousands of dollars, and all trade channels feel the material profits from the same. Not only is the city building a great many homes and public buildings as it approaches the 200,000 mark of population, but railroad construction work, municipal work, levee work and operations of that character are receiving attention on an extensive scale. The building permits for this month now drawing to a close will reach \$500,000. An increase of about 50 per cent. over June of 1905 will probably be shown by the time the month closes.

Planing Mill Completed.

The Kyle Lumber Co. of Gadsden, Ala., has completed its new planing mill and is preparing to put it in operation. The mill is of modern design and construction, and equipped with the most improved appliances. Its main building is 110x150 feet, with a double brick dry-kiln having a capacity of drying 50,000 feet of lumber in 48 hours. It is stated that a finished lumber stockhouse is to be erected at the east end of the main building and a rough-stock house on the north side. The plant is in charge of Superintendent Frazier Anderson, with O. W. Humphries as mill foreman.

Big Timber Purchase.

Messrs. Francis E. Watros and James L. Snyder of Wellsboro, Pa., are reported from Shreveport, La., as having closed a deal in that city with Allen Bros. & Wadley, Ltd., for the purchase of 35,000 acres of hardwood timber near Philadelphia, Miss., for a cash consideration of \$428,000. The purchasers, it is stated, will erect a large saw-mill plant and construct a short-line railroad to develop the timber.

Purchases Timber, Mill and Tramway

A dispatch from Valdosta, Ga., states that the McGehee Lumber Co. of Ocala, Fla., has closed negotiations with W. S. West for the purchase of a saw-mill at Louon, 30,000 acres of timber lands in Marion and Sumter counties, and 18 miles of tramway. It is said the deal involves a consideration of \$300,000.

Lumber Notes.

The Asheville (N. C.) Lumber Exchange, composed of lumbermen of Western North Carolina, will meet at Asheville on July 3.

The Arkansas Retail Lumber Dealers' Association has elected Messrs. L. R. Putnam, Fayetteville, president; Max D. Miller, Marianna, vice-president; C. M. Dickinson, Paragould, secretary and treasurer.

An automobile transportation company has been organized at Griffin, Ga., to operate a 12-passenger automobile between the experiment station and the Spalding Mill. The stockholders are E. H. Odom, treasurer; P. T. Archer, chauffeur; A. d'Antignac, T. S. Stevens, G. W. Hanson.

Norfolk, Va., has organized a league with the intent to increase the population of the city to 200,000 by 1910. Officers of the league are Messrs. R. A. Wainwright, president; C. A. Neff, vice-president; F. A. Porter, treasurer, and E. H. Hyman, secretary.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

NEW EQUIPMENT.

Liberal Purchases of Cars and Locomotives for Lines in the South.

The St. Louis & San Francisco Railroad has ordered 20 consolidation engines, 10 switching engines and 10 10-wheel engines from the American Locomotive Co.

The Kansas City Belt Line has ordered two six-wheel switching engines from the Baldwin Locomotive Works, weighing 121,000 pounds each.

The Norfolk & Western Railway is reported to be building 50 cabin cars at Roanoke, Va.

The Washington Railway & Electric Co., Washington, D. C., has ordered 40 closed passenger cars from the St. Louis Car Co.

The Seaboard Air Line has, it is reported, arranged to purchase from 125 to 150 flat cars of 60,000 pounds capacity each.

The equipment agreement between the Seaboard Air Line and S. D. Loring & Son of Boston covers 30 10-wheel freight engines, of which 20 will be built by the American Locomotive Co. and 10 by the Baldwin Locomotive Works; also 10 10-wheel passenger engines, which will be constructed at Baldwin's; 435 steel underframe box cars, to be built by the Western Steel Car & Foundry Co., Anniston, Ala.; 500 steel underframe drop-bottom gondola cars, to be built by the Pressed Steel Car Co. of Pittsburgh, Pa., and 500 steel underframe drop-bottom gondola cars, to be built by the South Baltimore Steel Car & Foundry Co., Baltimore, Md.

The Macon, Dublin & Savannah Railway has ordered 100 box cars of 80,000 pounds capacity each from the American Car & Foundry Co.

The Norfolk & Southern Railroad will, it is reported, buy new equipment as follows: Seven passenger cars, 8 freight engines, 2 switching engines, 600 box cars, 210 flat cars, 50 gondolas, 75 hay cars, 6 passenger coaches, 2 baggage cars and 2 mail and express cars.

The St. Louis, Brownsville & Mexico Railway is reported to be in the market for 75 tank cars of 100,000 pounds capacity each, besides a number of other steel underframe tank cars of 60,000 pounds capacity each, the tanks to have a capacity of 8000 gallons.

The Oklahoma Central Railway has ordered three eight-wheel engines and five mogul engines from the Baldwin Locomotive Works.

The Louisiana Railway & Navigation Co. has given an additional contract for 50 box cars to the American Car & Foundry Co.; the previous order was for 200 box cars.

The Texas & Pacific Railway has built a baggage and express car at its shops in Marshall, Texas.

The Atlanta, Birmingham & Atlantic Railway has purchased through the Atlantic & Birmingham Construction Co. 300 flat cars, 1100 box cars, 19 passenger coaches, 6 combination baggage and mail cars and 16 passenger and freight engines. The flat cars and the box cars will have a capacity of 60,000 pounds each.

The Georgia Railway & Electric Co. of Atlanta has completed 14 cars for its own use in its Atlanta shops, and will build, it is said, 16 more this year.

The Texas Central Railway has purchased 20 flat cars of 60,000 pounds capacity and 1 passenger car from the Hicks Locomotive and Car Works.

The Birmingham Southern Railway has received two new locomotives from the Baldwin Works.

BRUNSWICK TO BIRMINGHAM.

Construction Rapidly Progressing on the New Line With Connection to Atlanta.

Messrs. H. W. Poor & Co., 33 Wall street, New York, and 33 Congress street, Boston, in a circular offering for sale a portion of the first mortgage 5 per cent. bonds of the Atlanta, Birmingham & Atlantic Railroad Co., say that the road when completed will have a total of 629 miles of main line. Building is now in progress on the extension from Talbotton, Ga., to Birmingham, Ala., a distance of 210 miles, and it is expected that by August 15 the line will be in operation as far as Lagrange, Ga., 45 miles from Talbotton, although it is hoped to reach Warm Springs, 25 miles from Talbotton, at least a month earlier. It is expected to have the line in operation as far as Talladega, Ala., 145 miles from Talbotton, by the end of the current year. The connections to Atlanta will be about 70 miles long.

The road is being built with 80-pound rail, and the maximum curvature is six degrees. The maximum grade will be 1 per cent. on the extension, although on the first 200 miles from Brunswick to Montezuma, Ga., the grades are now being reduced to six-tenths of 1 per cent. Passing tracks with a capacity of 50 cars each are being built every five miles.

Concerning the terminal facilities, it is stated that an independent entrance to the center of Atlanta has been secured, and the terminal property of 200 acres is owned in fee. This will be sufficient for all purposes of the railroad, and arrangements for an entrance into Birmingham and a terminal are now under way. At Brunswick the water terminal has more than half a mile frontage on deep water, and consists of about 100 acres of land. As heretofore stated, contracts have been let to build two large piers, one 700 feet long and the other 400 feet long, besides four large warehouses. Four freight steamers with a dead-weight capacity of about 3000 tons each have been contracted for with builders, and the Brunswick Steamship Co. has been organized to manage them in connection with the railroad, these vessels running to New York and Boston. At Brunswick an independent coaling station is to be established. Interests friendly to the company have purchased a large acreage of coal lands in the Birmingham district, and this will secure a coal supply for the railroad and the steamship companies.

The plan of the promoters of the road is to construct a continuous line of railway from Brunswick, on the Atlantic ocean, through good local territory needing development in both Georgia and Alabama, with low grades, easy curves and short distances to Birmingham and Atlanta, and through connections at both these cities to the West. When the work is completed the company will have a short line from both Birmingham and Atlanta to tidewater at Brunswick. There will also be a short line from Atlanta to Birmingham.

Raleigh & Pamlico Sound Railroad.

Mr. David O. Sunderland, assistant engineer of the Raleigh & Pamlico Sound Railroad Co., informs the MANUFACTURERS' RECORD that the different points to be connected by the line and the distances thereto are as follows:

Raleigh to junction with Seaboard Air Line Railroad, 2.23 miles; Pamlico Junction to Nightdale, 12.1 miles; Nightdale to Wendell, 4.9 miles; Wendell to Zebulon, 4.73 miles; Zebulon to Wilson, 24.6 miles; Wilson to Stantonburg, 10 miles; Stantonburg to Farmville, 13.1 miles; Farmville to Greenville, 12.1 miles; Greenville to Chocowinity, 16.6 miles; Chocowinity

to Newbern, 28.14 miles, and Chocowinity to Washington, 3.78 miles; branch from Farmville to Snow Hill, 11 miles.

The road will have connection with the Seaboard Air Line at Pamlico Junction, Atlantic Coast Line at Wilson and Greenville, Norfolk & Southern Railroad at Washington, Pamlico, Oriental & Western Railroad at a point just across the river from Newbern. There is a small junction there, which will be called in all probability the Pamlico & Oriental Western Junction. The territory traversed is principally cotton, tobacco and timber land.

Mr. J. W. Stewart is chief engineer, with offices at Raleigh, N. C. Construction contracts have been let to J. G. White & Co. of New York. Contracts for rail, spikes, bolts, rail joints, frogs, etc., have been let to the Pennsylvania Steel Co. of Steelton, Pa., through R. C. Hoffman & Co. of Baltimore. The company is not yet in a position to ask bids for equipment, as it is working only a few construction trains.

KEY WEST ELECTRIC.

Stone & Webster of Boston Will Improve Railway and Lighting Plant.

Messrs. Stone & Webster, 84 State street, Boston, inform the MANUFACTURERS' RECORD that they have purchased the Key West Electric Co., which does the entire electric railway and lighting business of Key West, Fla.

The company will retire all the outstanding securities, and the new capitalization will be as follows: Bonds, first mortgage, 50-year, 5 per cent. gold, to be authorized, \$1,000,000; to be issued, \$450,000; preferred stock, 6 per cent. non-cumulative, to be authorized and issued, \$230,000; common stock, to be authorized and issued, \$500,000.

New money will be provided to re-equip the present power station, to purchase new cars and equipment, to extend the lighting system, to develop the gas business under the franchise owned by the company and to put the entire property in the best operating condition. The present street-railway mileage is five miles.

Key West is soon to have direct rail connection with the mainland by the completion of Flagler's extension of his Florida East Coast Line, now under construction. In anticipation of this the cigar business is growing rapidly, the Havana American Cigar Co. having just completed a large factory there employing 600 hands.

Brownsville, Hidalgo & Northern.

Mr. E. B. Gore, chief engineer of the proposed Brownsville, Hidalgo & Northern Railroad, informs the MANUFACTURERS' RECORD that the work of locating the line is progressing as rapidly as conditions permit. The road will be altogether 550 miles long, but it is not believed that any considerable amount of construction will be let before September. At present all work is in charge of Mr. Gore at Brownsville, Texas.

South of Corpus Christi the line will run through fine land adapted to the raising of vegetables, but which is now uncultivated because the cost of transportation to shipping points is such as to rob vegetable-growing of any profit. The line will also open up a large area suitable for sugar-cane cultivation.

In conclusion, Mr. Gore says: "You may look for 'something doing' on the Rio Grande in the next five years."

Two Interesting Pamphlets.

The American Locomotive Co., New York city, has issued a pamphlet entitled "Electric Motor and Trailer Trucks," which describes such equipment designed and built by this corporation. There are 15 full-page drawings, accompanied by

data showing the dimensions. The drawings display construction in detail and include motor trucks built for the New York Central suburban service, the Paris & Orleans Railway of France, the Schenectady Railway, the Delaware & Hudson, the Brooklyn Rapid Transit, the Buffalo & Lockport and other lines.

Another pamphlet issued by the same company concerns the locomotive tests made by the Pennsylvania Railroad at the Louisiana Purchase Exposition. It was compiled by Dr. W. F. M. Goss from a recent publication of the railroad company. Each locomotive is described and its work discussed. There is, moreover, a summary of data secured by the tests. The function of the book is to present concisely and in a form for convenient reference all the information secured by the operation of the testing plant.

Appointments.

The Illinois Central Railroad Co. announces that Mr. V. E. Labbe is appointed city passenger and ticket agent, Sioux City, Iowa, vice Mr. H. E. Casner, resigned to accept service with freight department. Mr. R. A. Busby is appointed city passenger and ticket agent, Council Bluffs, Iowa, vice Mr. V. E. Labbe, promoted. Mr. H. C. Webb is appointed city passenger and ticket agent, Evansville, Ind., vice Mr. G. W. Schelke, promoted.

The Southern Railway Co. announces that Mr. C. P. Johnson has been appointed traveling freight agent, Board of Trade Building, Kansas City, Mo.

Mr. J. C. Whitney, second vice-president and traffic manager of the Merchants & Miners' Transportation Co., announces that Mr. C. S. Hoskins has been promoted to the position of freight traffic manager. He was formerly general freight agent, which position has been abolished.

"Santa Fe Southwest."

The "Santa Fe Southwest" is an interesting and beautifully illustrated folder by John T. Bramhall describing the country served by and adjoining the Santa Fe Route. The book relates to Kansas, Oklahoma, Indian Territory, Arkansas, Texas, New Mexico, Colorado, Arizona and California. The railroad company offers special rates to points in Oklahoma and Indian Territory and in a portion of Texas, besides to Western Kansas, Eastern Colorado and points in the Pecos Valley in New Mexico, these reduced fares taking effect on the first and third Tuesdays of each month from June to November, inclusive. W. J. Black is passenger traffic manager at Chicago.

A Merited Promotion.

Mr. W. P. Turner, formerly general passenger agent, has been promoted to the position of passenger traffic manager of the Merchants & Miners' Transportation Co., with headquarters at Baltimore, Md. Mr. Turner has been connected with this company for a long time, and is one of the most energetic and popular of passenger department officials. The success of the company in the development of its passenger business is largely the result of his constant and painstaking efforts to serve the interests of the traveling public, as well as those of his company. The position of general passenger agent has been abolished.

Joint Freight Agency.

On July 1 the New Orleans & Northern Railroad Co., the Mobile & Ohio Railroad Co., the Southern Railway Co., the Alabama Great Southern Railroad Co., the Cincinnati, New Orleans & Texas Pacific Railway, the Alabama & Vicksburg Railway Co. and the Vicksburg, Shreveport & Pacific Railway Co. will establish at New Orleans, La., a joint foreign

freight agency to facilitate the handling of export and import traffic through New Orleans and Chalmette, La. Mr. J. J. Campion is appointed joint foreign freight agent in charge of the office.

Marianna, Brinkley & Western.

Mr. W. P. Weld, secretary, writes from Marianna, Ark., to the MANUFACTURERS' RECORD confirming the report that the Marianna, Brinkley & Western Railroad Co. has been incorporated to build a line from Marianna to Brinkley, Ark., about 30 miles. Connection will be made at Brinkley with the Chicago, Rock Island & Pacific Railway, and also with the St. Louis Southwestern Railway. The engineer has not yet been selected, and bids for construction and equipment will not be requested until a date to be hereafter announced.

Reduced Time on M. & O.

The Mobile & Ohio Railroad has established a limited train between St. Louis and Mobile and New Orleans, and has reduced the time. The southbound train that formerly left St. Louis at 8 A. M. now leaves at 11 A. M., and yet reaches the Gulf terminals named as formerly at 7.25 and 8.45 A. M., respectively. The limited is composed of the finest vestibuled cars, with diner, electric lighted and fanned, and the service is acknowledged to be second to none between the important terminals named.

New Freight Yard.

Mr. Thomas M. Ward, chief engineer of the Maryland & Pennsylvania Railroad, informs the MANUFACTURERS' RECORD that the company is now grading for a new freight yard at its Baltimore terminal, and it is proposed to build a connecting track from the yard to the Baltimore & Ohio Railroad for the transfer of business. The new yard is situated on the Falls road above North avenue and south of the Peddicord stone quarry.

Railroad Notes.

The Virginia & Southwestern Railway Co. is reported to have purchased the Black Mountain Railroad from Darbey to Interment, Va., 23 miles, and also the Pigeon Creek Railroad from Interment to the Imboden Coal & Coke Co.'s plant, two miles.

A press report from Louisville Ky., says that the Louisville & Indianapolis Traction Co. is pushing grading from Sellersburg to Scottsburg, and it is expected that by the fall of next year electric cars will be running direct from Louisville to Indianapolis, Ind.

Mr. L. F. Loree, formerly president of the Baltimore & Ohio Railroad, and later the active head of the Rock Island system, is now chairman of the executive committee of the Kansas City Southern Railroad and also a director of that company, to which post he was recently elected.

A dispatch from Oklahoma City, O. T., says that President F. N. Finney of the Missouri, Kansas & Texas Railway intimated that a railroad would be built northwest from Oklahoma City to Colorado by an independent company, but will be controlled later by his company. This is supposed to refer to the Pueblo, Oklahoma & New Orleans Railroad, lately incorporated.

Mr. A. Pope has, it is reported, been appointed traffic manager of the Georgia & Florida Railway, which is the name of the line from Augusta, Ga., to Valdosta, Ga., and the Gulf, lately announced by John Skelton Williams of Richmond, Va., and others. Mr. Pope has been assistant general freight agent of the Seaboard Air Line. Six existing railroads are in the Georgia & Florida system.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

The Kansas City Cotton Mills Co.

The Kansas City (Mo.) Cotton Mills Co. is making steady progress with the construction and improvement of buildings previously acquired for cotton-manufacturing purposes. This company has been previously reported. It plans to install 10,000 spindles to start with and eventually increase to 100,000 spindles. Its spinning machinery will be accompanied by looms, as cotton duck will be the product. The company is utilizing a plant formerly known as the Union Cotton Oil and Meal Works, which has been purchased and includes a 110-ton ice factory and a 100-ton cotton-oil mill. The latter will be put in operation when the new crop of seed is on the market. Messrs. Frank P. Sheldon & Co. of Providence, R. I., are in charge of the installation of the textile machinery. Officers of the Kansas City Cotton Mills Co. are: President, William Peet; vice-president, Witten McDonald, and secretary-treasurer, Edw. E. Holmes, vice-president of the United States & Mexican Trust Co. Capital stock is \$1,000,000, of which \$400,000 is preferred and the balance is common.

The Elk Cotton Mills.

The Elk Cotton Mills of Dalton, Ga., formally organized during the week, electing J. W. Barrett, president; F. T. Hardwick, vice-president; M. C. Foster, secretary, and J. E. Satterfield, treasurer. Messrs. J. L. Edmondson, W. C. Martin, H. M. Veach, R. L. Denton and T. A. Blythe are the directors. This company was recently mentioned by the MANUFACTURERS' RECORD as having incorporated, etc. Its authorized capital stock is \$200,000, and its plans are to build a yarn mill of 7500 spindles. Arrangements are now being completed, site having been purchased last week.

The Lizzie Cotton Mills Co.

The Lizzie Cotton Mills Co. of Selma, N. C., has formally organized with the election of M. C. Winston, president; D. B. Oliver, vice-president, and L. D. Debnam, secretary-treasurer. This is the company reported last week and previously as to build a 10,000-spindle yarn mill. Details as to size of buildings, contracts for erecting same and for machinery are now being completed. Mr. Stuart W. Cramer of Charlotte, N. C., has been engaged as engineer in charge of installing the machinery.

A New Compress.

The Ginners' Cotton Co. of Waco, Texas, is issuing a circular giving details regarding a new round-bale press known as "The Ginners' Press." This press is the invention of Mr. W. T. Bessonette of Temple, Texas, inventor, it is claimed, of the first round-bale press put on the market, and in this press Mr. Bessonette thinks he has overcome all difficulties in the way of a round-bale press.

The Pink Manufacturing Co.

The Pink Manufacturing Co. of Lattimore, N. C., will manufacture jute bagging. It was referred to last week as incorporated by J. L. Stroup and others,

the capital stock being \$50,000. Buildings have been erected and contracts have been awarded for machinery, which is now being put in position. Operations are to begin at once.

Textile Notes.

It is reported that the Oriental Textile Mills of Houston Heights, Texas, will erect additional buildings and install new machinery.

It is reported that J. D. Kennedy & Co. of Memphis, Tenn., will organize a company to build a cotton-yarn mill in Mammoth Spring, Ark.

Walton Cotton Mills of Monroe, Ga., is reported as to increase capital by \$50,000 for the purpose of increasing present equipment, which is 5000 spindles and 156 looms.

Capitola Manufacturing Co. of Marshall, N. C., recently reported as to add 4000 spindles, has awarded contract for the new machinery. Its capital stock will be increased.

According to announcements at Columbus, Ga., the Eagle & Phenix Mills of that city closed last week the sale of about 500,000 pounds of rope, thus taking care of the plant's production of cotton rope up to next April.

The Denison (Texas) Cotton Mills has awarded contract for 140 looms and other machinery to be added to its present equipment of 12,135 spindles and accompanying apparatus. This improvement will enable the mill to produce cloth.

The Texas Bag & Fiber Co. has been incorporated with a capital stock of \$100,000 for manufacturing bags, fiber, etc. Its incorporators are Messrs. Judson S. Bemis, Stephen A. Bemis and Thomas J. McLemore of St. Louis, Mo.; Robert J. Wood of New Orleans, La.; Albert F. Bemis and Alex. J. Phillips of Boston, Mass., and Judson M. Bemis of Colorado Springs, Col.

The Sherman (Texas) Cotton Mills, recently reported as to enlarge its plant, has awarded contract for additional machinery, which will add considerably to its present capacity. An issuance of \$125,000 of bonds has been arranged in connection with these improvements. Mr. H. W. Fairbanks of the Dallas (Texas) Cotton Mills recently disposed of his interests in that company to purchase control of the Sherman enterprise. Present equipment of the Sherman Cotton Mills is 8000 spindles and 160 looms.

Corsicana Wants Factories.

Mr. S. W. Bogy of Corsicana, Texas, writes the MANUFACTURERS' RECORD that "although Corsicana has cheap fuel in her big natural-gas wells and the oil fields here and the residuum from her two big oil refineries, factories are not coming fast enough. A meeting of the Commercial Club was held last week to devise means and methods to offer further inducements to legitimate manufacturing enterprises."

Mr. W. C. Nixon, first vice-president and general manager of the Gulf, Colorado & Santa Fe Railway, has, according to a report from Galveston, Texas, resigned to accept the place of vice-president and general manager of the St. Louis & San Francisco Railroad, with headquarters at St. Louis.

Preliminary to a meeting at Lake Toxaway, N. C., a number of the cotton-mill presidents at South Carolina met last week at Spartanburg and discussed the labor situation.

The South Carolina Hardware Dealers' Association has elected Messrs. T. O. Flowers of Rock Hill, president, and Paul W. McLure of Greenwood, secretary and treasurer.

MINING

Buys Mines, Quarries and Furnace.

With reference to the organization of the Princess Furnace Co., Real Estate Trust Co. Building, Philadelphia, Pa., the MANUFACTURERS' RECORD is informed that this company was organized to take over the business of the Princess Iron Co. The furnace plant, ore mines and stone quarries of the latter company, located at Glen Wilton, Va., have been purchased with the purpose of conducting operations along similar lines to those heretofore pursued. It is stated that there are large deposits of brown ore on the property, from which the Princess Furnace Co. expects to make a high-grade brown hematite foundry iron. These deposits are so easily accessible to the furnace that the necessity of paying transportation charges from the mine will be precluded. The Princess Furnace Co. is a Virginia corporation with an authorized capital of \$500,000. Mr. J. Esrey Johnson, Jr., has been elected general manager of the company.

Alabama Coal.

Statistics of the coal production of Alabama during 1905 have been compiled by Mr. Edward W. Parker of the United States Geological Survey. They show that the total production of the year was 11,803,060 short tons, which had a value on the spot of \$14,387,721. This was an increase in tonnage of 604,023, or 5.3 per cent., and a gain in value of \$907,610, or 6.7 per cent. over the value of 1904. Compared with 1903, the year of largest production heretofore, the output in 1905 shows an increase of 211,745 short tons in amount and of \$140,923 in value. The average price per ton in 1905 was \$1.21, as compared with \$1.20 in 1904 and \$1.22 in 1903.

Leases Coal Lands.

Mr. H. T. Wilson of the H. T. Wilson Coal Co. of Detroit, Mich., it is announced, has leased about 600 acres of coal land from the Robertson Consolidated Land Co., located near Logan, W. Va. The property is said to contain a vein of coal about five feet thick and of good quality. Details for its development, it is stated, have been determined and the construction of a tippie, dwelling-houses and store begun. It is understood that 20 houses will be erected at this time and the same number at a later date.

Mineral Refinery.

The Tennessee Refinery Co. of New York city is reported to have leased 12 acres of land near Chattanooga, Tenn., which contain deposits of kaolin, siliceous, feldspar, china clay, etc. The purpose of the company, it is understood, is to erect a plant for refining these minerals, and a site for its location is now being considered. About \$10,000 will be expended for the refinery, and Mr. W. E. Ragsdale will be the manager in charge of operations at Chattanooga.

Buys West Virginia Coal Properties.

The Hinsch Coal & Coke Co. of Cincinnati, Ohio, is reported to have purchased the properties of the Norfolk & Western Coal & Coke Co., including mines of the Borderland Coal Co. in Mingo county, the Williamson Coal & Coke Co. at Williamson and the Mate Creek Coal Co. at Matewan, all in West Virginia. The mines have a daily capacity of about 30 cars. It is understood the purchase involves an approximate consideration of \$100,000.

The Maryland Steel Co. has received from the Isthmian Canal Commission a contract for the construction of two steel seagoing suction dredges for use at the Isthmus. The contract represents \$724,000.

COTTONSEED

TEXAS COTTONSEED CRUSHERS.

Successful Annual Meeting of the Association at Galveston.

[Special Cor. Manufacturers' Record.]
Galveston, Texas, June 22.

About 250 crushers, beside machinery and supply men, attended this week the three days' session of the twelfth annual convention here of the Texas Cottonseed Crushers' Association. Mayor H. A. Landes of Galveston welcomed the convention, and response was made by Mr. R. L. Hamilton of Corsicana, the president of the association. In addition to reports by officers and committees of the association, addresses were made on topics bearing upon the cottonseed industry by Mr. F. W. Brode of Memphis, Tenn.; Mr. Fielding Wallace of Augusta, Ga.; Prof. J. H. Connell of Dallas, Mr. Edwin Lehman Johnson of Memphis, Tenn., and others. In his annual report President Hamilton urged greater co-operation with the mutual fire-insurance bureau of the association and greater personal and financial assistance for the bureau of publicity. Secretary Robert Gibson reviewed the work of the legislative committee, of which Mr. F. H. Bailey was chairman; the arbitration committee, the weighing and inspection bureau at Galveston and other features of the year's work. He reported a membership of 158 active and 21 associate. Treasurer J. H. Miller reported a balance in his hands of about \$600. Mr. I. Jalonick, manager of the insurance bureau, called attention to the splendid protection the majority of the oil mills of Texas are receiving through the mutual organization, and the committee on insurance urged every mill to carry a portion of their fire risk in the mutual bureau. The report of the bureau of publicity dwelt upon the experiments for determining the value of cottonseed meal as a food for hogs and the home use of cotton oil. It said:

"The experiments in determining the value of cottonseed meal as a food for hogs, which you began at our State experiment station two years ago, have been continued, and other efforts to increase its use for the purpose have been prosecuted. And your committee feel that, had they accomplished nothing else, the success had in this direction alone has more than justified the work done and the expenditure made. It was only little more than two years ago since the first public statement was made that cottonseed meal was a safe, cheap and efficient feed for swine. At that time every authority on the subject had pronounced against it, and from expert writers on the subject, from the State experiment stations all over the country and from many practical feeders had gone forth the edict that cottonseed meal in any form was poisonous to hogs. Today it is the recognized part of the ration in daily use by hundreds of the most intelligent feeders in this and other Southern States. The best agricultural journals of the South are giving it wide and frequent discussion, and in four different States the experiment stations, which as yet declining to give it hearty endorsement, have largely modified their views concerning, have recommended the use under certain conditions, and, with the caution characteristic of their work, are giving it investigation, which can but result in advocating its use.

"And, in the meantime, practical feeders, who think and act for themselves, are calmly feeding it to their hogs every day and complacently accepting the increased gains and better economy secured in its constant use.

"The home use of cotton oil among our

own people has had continuous attention, and many mills that have, however slightly, followed the committee's urging and giving attention to the matter, make gratifying reports as to the success attained in its increased use in their vicinity.

"In fact, your committee believes that never in the history of the business has the question of home uses of cottonseed products been so actively discussed or so widely considered by home people as is being done today, and that never in the history of advertising has wider publicity been gained on so small an expenditure of money.

"For this your committee takes no sort of credit and mention it as no evidence of superior work on their part, but solely as evidence of the fact that the public is keenly alive to the importance of the very thing they have had to teach and has eagerly accepted everything they have had to say concerning it. Especially is this found to be the case in the light of the recent disclosure as to the methods and practices of handling packing-house products, which disclosures have given particular significance to the fact that the cotton-oil mills were ready to furnish, as a substitute for the very articles about which were shown to cluster so many horrible and disgusting surroundings, a food product from the hand of nature and uncontaminated by the touch of man, beautiful to the eye, pleasant to both palate and nostrils, healthful as the winds of heaven and pure as the breath of spring."

The committee on the president's address reported as follows:

"As to our mutual fire-insurance bureau, it is known to be a fact by each of your committee that there has been much financial good done by reason of the operations of this bureau, and we urge your co-operation and taking stock in this bureau by each and every oil mill. In so doing we will make it a decided success.

"We heartily commend the president in his personal work, together with the assistance of the secretary, in accomplishing the good work and success in the handling of the meal and cake weighing and inspection at Galveston, which has been decidedly improved within the past 12 months.

"We consider the bureau of publicity the most important work the association has before it. It has been clearly demonstrated to those who have studied the question and have seen the benefits derived therefrom that the small amount of money spent by this bureau is money better spent than any other your committee finds in the work of this association.

"We heartily recommend the work at least be kept up to its present standard and that every effort be made to increase same, and we furthermore recommend that a strong solicitation be made by each of our members to non-members to join our association and aid us in a financial way for the benefits they are now deriving from this good work.

"Unless we have a considerable increase in membership our funds will not be sufficient to carry on the work as in the past, and unless funds can be raised in the above manner we recommend that some special action be taken by this body to raise the necessary funds to keep up this work."

The question of standardizing meal and cake, respectively, for Texas and Territory mills, with regard to the varying quantities of protein, ammonia, etc., after a spirited discussion, a committee was appointed to determine just what should be done in that respect.

Officers were elected as follows: President, John W. O'Neill, Clarksville; vice-president, Ed Woodall, Hillsboro; secre-

tary, Robert Gibson, Dallas; treasurer, J. N. Miller, Royse; official chemist, P. S. Tilson, Houston; governing committees, G. S. LeClercq, Paris; F. A. Blaine, Fort Worth; P. S. Grogan, Hearne; Claude Wiley, Tyler, and W. A. Sherman, Houston, for Texas; A. G. Eakins, Madill; N. F. Irish, Waggoner; J. W. Dupree, Wynnewood, and George Dashner, Ardmore, for Oklahoma and Indian Territory.

JOHN BANNON.

Cotton-Oil Expellers.

Editor Manufacturers' Record:

A reprint from the MANUFACTURERS' RECORD of January 11, 1906, came to my notice the other day, and I beg to differ with the writer as to any other methods of oil extraction from cottonseed. I am, as the writer quotes, also a practical oil miller with a good many years of actual experience as a designer and working superintendent. I do not write this to belittle the work of the writer; on the contrary, I have the highest regard both as an oil-mill man and writer for the gentleman, but as knowledge is only gained by exchange of ideas and finding out what others are doing, I will tell what we are doing every day in the line of oil milling.

The time is here now when the owners of hydraulic oil mills may look around to see what to do with the costly machinery now in their mills. The fundamental principles of correct oil milling as they have existed from the inception of the business remains today unchanged; that is, that pressure has to extract the oil, but must differ in so far that oil can and is extracted without being cooked. Take, for instance, the pressure that is exerted by the hydraulic press, which perhaps never exceeds 4000 pounds per square inch on the ram. The ram is usually 16 inches diameter, the area of which is 201.06 square inches, multiplied by 4000, equals 804,240 pounds of actual pressure exerted on the cake. The

cake being 14x32 inches, would give only a pressure per square inch on cake of 1795 pounds and a fraction; besides, most of the oil has to flow from the center of cake to the outside. Now with the cold-process press than I am going to tell you of, we have a pressure of more than 8000 pounds per square inch of cake, and the drainage is most perfect, being practically all around a six-inch barrel, and the cake not being very thick, from five-eighths to one-eighth inch in thickness only. We now come to the "inconceivable augur-shaped device," that is, the "Anderson oil expeller." In a staved-up barrel revolves a shaft at a very slow speed. This shaft has projections almost like a conveyor, but not a continuous flight, nor of even pitch, and a cone-shaped sleeve on the outlet to regulate the pressure where the cake passes out about one-eighth inch thick. The whole cold seed closely linted, or delinted cold seed, is fed into this press in a continuous stream. The seed is gradually compressed into smaller space as it travels along the length of the barrel; I might say it is an accumulative pressure; but the seed is not revolved, only pushed along. The oil commences to flow as soon as it reaches the barrel until near the end of the press, where seed is discharged in shape of cake about one-eighth inch thick. No press cloth is used, and the oil flows out freely. Notwithstanding the fact that the whole seed went into the press, the oil is not discolored, not even condemned as being useless for most purposes into which cotton oil finds its way, but, on the contrary, this oil is the very best that has ever been made. Here is a report from one of our largest refineries that has handled this oil. A sample of oil made by the writer on March 7, 1906, shows the following: Free fatty acid, 50 per cent.; color of crude, light red; refining loc., 2.16 per cent.; color of

refined (lemon), 35 yellow, 3.1 red; flavor of refined, neutral; bleached oil, color, 3 yellow-red. Another peculiarity of the cold-pressed oil is that it always will bleach, and that it will keep a long time before refining. As to the quantity of oil extracted, the writer had seed analyzed which contained 56 gallons of oil per ton of seed, and we extracted by the oil process 44 gallons of oil, which is a better showing than a hydraulic press can do.

Now as to the cake or meal, taking 1900 pounds of clean seed per ton as a basis, we linted this seed twice, taking off 113 pounds of lint; 44 gallons of oil equals 330 pounds, which leaves 1457 pounds of meal. This meal, as some of our experimental stations have conceded, is of equal feed value, pound for pound, with hydraulic-made meal, and which analyzes 5 per cent. ammonia, 31.25 per cent. digestible protein and 8.25 per cent. moisture. The reason that cold-pressed meal is of such a high grade is simply that we leave the feed value in the meal that nature provided in the seed, only extracting the oil that is not digestible for cattle. On the other hand, the hydraulic mills destroy about 33 per cent. of the albuminoids by cooking, which are thereby made indigestible for cattle. A modern up-to-date oil mill will only consist of linters and delinters, expellers and meal mill, doing away with hullers, separators, rolls, cookers, formers, hydraulic pumps, valves and piping; besides, a modern mill is a labor-saving device, using no press cloth and being automatic in all its actions, the seed being handled in the seed-house, and the next labor will be taking the meal away, saving a great deal of labor in the mill to such an extent that the largest mill can be handled with only one man and two helpers in the pressroom. The profits of this new system of oil milling will be at least three times as big as what the mills can make now.

H. J. J. THIESSEN.

Sherman, Texas.

State Organizations.

The Georgia Cottonseed Crushers' Association elected Messrs. J. A. Aycock of Carrollton, president; George F. Tennille of Savannah, M. S. Harper, E. P. McBurney and L. A. Ransom of Atlanta, H. E. Weeks of Columbia, S. B. Yow of Lavonia, J. L. Hand of Pelham, H. Bussey of Columbus, W. E. McCall of Macon, John Bostwick and C. Douthit, vice-presidents; Thomas Eggleston of Atlanta, treasurer, and J. L. Benton of Monticello, secretary.

The South Carolina Cottonseed Crushers' Association has been organized with Messrs. F. P. Hunter of Darlington, president; J. J. Lawton of Huntsville, vice-president, and Benjamin F. Taylor of Columbia, secretary and treasurer.

Alcohol and Oil Mills.

At the organizing meeting of the South Carolina branch of the Interstate Cottonseed Crushers' Association some attention was given to the possibility of using the machinery, the space and the organization of cotton-oil mills for the manufacture of alcohol to be denatured for use in industry. It was pointed out that potatoes, which can be freely grown in South Carolina, might be readily crushed at the mills, and that there might be a large field thus opened for manufactured alcohol.

Leather Scraps and Hair.

Messrs. Thos. H. White & Co. of 11 South Gay street, Baltimore, Md., are in communication with parties who purchase leather scrap and clippings or any refuse that can be acidulated or ground; also with buyers of hair of any kind in any condition. Sellers of such refuse are invited to correspond with White & Co.

MECHANICAL

Koerting Four-Cycle Gas Engine.

The Koerting four-cycle gas engine was first commercially used in Germany in 1879, when it entered into competition with the steam engine. It has undergone numerous improvements since, and has been developed to such an extent that it is now competing with steam engines not only in Germany, where scarcity of coal is conducive to the adoption of high efficiency prime movers, but also in America, where the exhaustion of coal fields has

sion be carried as high as this ignition temperature will permit.

Gases containing large quantities of hydrogen and hydrocarbons ignite at a lower temperature than gases in which the percentage of these constituents is lower. As the size of the engine increases the cylinder jacket becomes less effective in cooling the central parts of the mass of mixture. The evil effect of these conditions, which tend to produce preignition, is kept within bounds by a new system of jackets through which cold water is circulated. This reduces the temperature of the charge, so that the comparatively high

gines not equipped with properly-designed mixing valves, is effectually avoided. The use of these mixing valves, which supply the cylinder with a perfect combustible from the first revolution made by the engine, greatly facilitates starting, which again gives the engines an inestimable advantage over other types.

The combustible complements of air and gas mixed according to the requirements of perfect combustion, before being admitted to the power cylinder, is made to pass a throttling valve, which determines the amount of fuel necessary to maintain the required speed for one complete cycle.

As will be readily seen from this description, the governor of the Koerting engine does not regulate the speed of the engine by varying the proportions of gas and air, but by simply measuring out the amount of mixture required by the load on the engine.

The governor, operating on a balanced valve, has little work thrown upon it, and consequently is very sensitive. It operates with both speed and precision, making the regulation of the Koerting gas engine equal to that of the steam engine. This factor renders the engines extremely desirable for installations requiring the parallel operation of multiphase generators, under which conditions many installations are in operation. In running this engine receives an impulse every two revolutions. No charges are missed, but the size of each charge is closely proportioned to the amount of work to be done. This, coupled with the advantages to be gained from a perfect governor and mixing valve, insures close regulation under all loads and enables the engine to satisfy the most exacting requirements.

Ignition is effected in the four-cycle engine by an oscillating electro-magneto, which insures a spark of uniform strength, regardless of the speed of the engine. There are no batteries or spark coils to run down or get out of adjustment. The magneto is positively driven, and this mechanism has proven itself entirely reliable. The mechanism actuating the magnetoes and ignition plugs is driven from the end of the main valve gear, shown in Fig. 2. The plugs carrying the rods and contact points, between which the spark is produced, can be readily removed to facilitate inspection

insures constant and uniform oil supply.

The cylinder head of the engine is designed to receive the admission and exhaust valve housings, the former being located at the top and the latter at the bottom of the head. In the larger engines the exhaust valves are cooled and a special oiling device is provided for the lubrication of their stems.

As shown in the sectional view (Fig. 1), the cooling water, after passing through the jackets of the valve housings, enters the main cylinder jackets, from which it passes through a visible overflow to the exhaust-pipe jacket, after which it may be used, in case of suction-producer plants, for making steam for the generator.

The air drawn into the mixing valve is taken from the inside of the bedplate casting, which not only assists in cooling the metal surrounding the bearings and cylinder, but at the same time acts as a silencer for the incoming air.

The cavities which form the water jackets are made deeper than would otherwise be necessary in order to afford space for sediment, which the cooling water may leave behind, without encroaching on the cooling surface of the cylinder and head. These pockets are provided with hand-hole plates to facilitate cleaning.

The engines are started by means of compressed air stored in a receiver. The pressure is maintained by an auxiliary compressor driven by the engine itself or by other power. Engines up to 100 horsepower require about two horse-power for starting, and larger engines in proportion. This power, however, is required for only a very short space of time, the engine running on its own power after having made two or three complete revolutions.

The valve gear is provided with a lever by which the exhaust cam roller can be thrown into such a position that the exhaust valve will remain open, allowing the engine to be easily turned over by hand preparatory to starting, for the purpose of inspection.

The valves are operated by push rods from cams on a shaft driven by skew gear from the crankshaft. The boxes of this shaft are rigidly supported by three brackets, near one of which is located the spur gear which runs the governor.

The Koerting four-cycle gas engines are

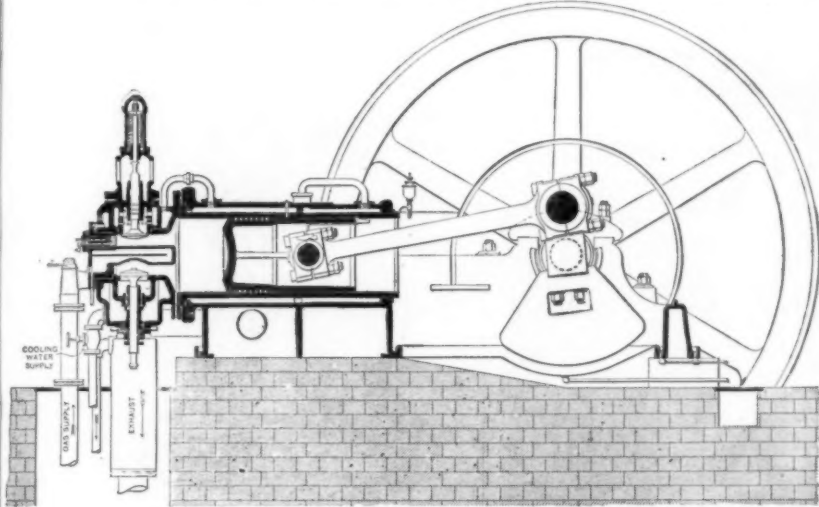


Fig. 1. LONGITUDINAL SECTION OF KOERTING FOUR-CYCLE GAS ENGINE, showing cylinder construction and valves.

FIG. 1.—KOERTING FOUR-CYCLE GAS ENGINE.

not been considered a factor to warrant unusual apprehension.

In the accompanying sectional view of a Koerting standard four-cycle gas engine, Fig. 1, the piston has advanced about halfway on its power stroke. Ignition of the combustible charge, effected by a special mechanism described in detail under that head, having taken place just before the crank passed dead center, the high-pressure gas, expanding after having received the heat generated by its own combustion, transforms heat energy into work, which, transmitted through the piston and connecting rod, turns the main engine shaft.

Just before the engine passes outer dead center the exhaust valve at bottom of cylinder head is opened and the pressure at once drops to that of the atmosphere. This valve remains open during the return stroke and allows the burned gases to be expelled by the returning piston. The hot gas escaping through the valve opening is cooled by water surrounding the valve housing and exhaust pipe, which reduces back pressure and tends to silence the exhaust.

As the piston starts on its second out-stroke the exhaust valve is closed and the admission valve is opened, allowing the piston to suck in a fresh charge of gas and air accurately proportioned, by passing through an outside set valve, to conform to the requirements of perfect combustion and maximum economy.

On the return stroke both admission and exhaust valves are closed and the charge thus trapped in the cylinder is compressed by the returning piston to the volume of the clearance spaces afforded in the end of the cylinder and the combustion chamber.

During compression the temperature of the charge rises very rapidly, and the limit at which the compressed charge will ignite from its own heat is soon reached. Since in gas-engine practice the economy attained depends upon the degree of compression of the charge prior to ignition, modern practice demands that compres-

sion necessary to high economy is made possible. In order, then, to employ rich gases to their best advantage in medium and large size engines, the Koerting engine is provided with specially-designed internal water jacket, the cooling surface of which may be increased to meet the demand made by a gas of any composition. This device consists of a hollow water-cooled cover secured to the back of the cylinder head and projecting into the combustion chamber. By slightly changing the shape of this casting the cooling surface may be varied at will to suit any requirements. This simple device allows even the largest engines to enjoy the same high compression used in the smallest, without fear of preignition.

The special double-seated mixing valve, to which this engine owes much of its popularity, is so constructed as to be operated automatically by the incoming complements of gas and air. The exhaust valve being closed when the engine passes dead center, the piston starting its outward stroke tends to form a vacuum within the cylinder. Only a very slight reduction in pressure is produced, however, before outside atmospheric pressure opens the mixing valve and air is admitted by one of its seats and gas by the other.

On entering the mixing valve the stream of incoming gas is split up into a number of small streams flowing at right angles to the incoming air: this mixture is again passed through another set of ports, which impart to it a whirling motion and insure perfect mixing of the two constituents before they are admitted to the cylinder.

The incoming gas, having passed through a set regulating valve in the gas main, is supplied to the mixing valve in the proper proportion to insure perfect combustion and consequent maximum efficiency.

This outside set valve, once having been adjusted to suit the kind of gas to be employed, no other regulating is necessary, and the frequent bothersome adjustments and loss of efficiency due to imperfect mixing, unavoidably encountered in other en-

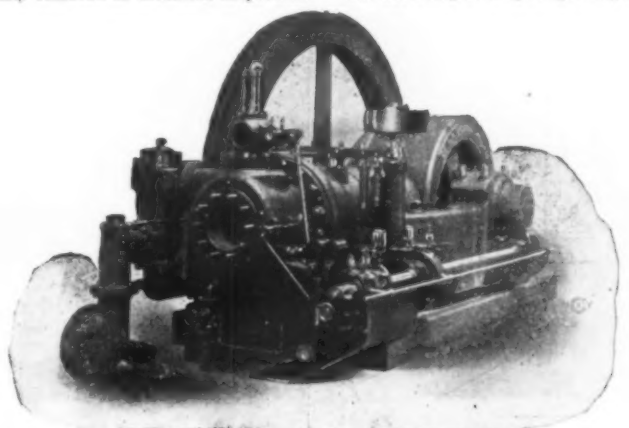


FIG. 2.—KOERTING FOUR-CYCLE GAS ENGINE.

and cleaning. The mechanism is so constructed that the time of ignition can be varied at pleasure while the engine is running should a change of ignition be desired. When engines of large capacity are operated for a considerable time under greatly reduced loads this feature becomes of special value.

The crankpins of these engines are lubricated by an effective centrifugal method by which the oil fed from stationary oil cups is brought through the hollow crankpins direct to the bearing surfaces. The main bearings are of the ring-oiling type. The cylinders are lubricated by a positively driven oiling device, which

built in the United States exclusively by the De La Vergne Machine Co. of New York.

The Cutler Mailing System.

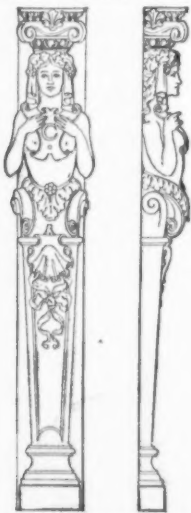
One of many illustrations of how the rapid development of the South is creating a demand for the most modern improvements is seen in the installation of Cutler mailing systems throughout that section. This system has become a necessity in modern buildings of numerous stories, and many Southern office buildings, hotels and other large structures are being equipped with it. An instance of an especially fine installation is that in the Candler Building

at Atlanta, Ga. This installation comprises a box of cast brass, slightly oxidized, with twin chutes discharging into it in order to give the requisite capacity for so large a building and to insure continuity of service. The mail box is one of the finest that has ever been manufactured.



CUTLER MAILING BOX IN CANDLER BUILDING.

It is erected on a marble slab in conformity with the other marble work in the building. An accompanying illustration presents a view of this box. Another view shows the details of the caryatides. These views indicate the exceptional beauty of this particular installation. The Cutler



DETAILS OF CARYATIDES—CUTLER BOX

mailing system is owned by the Cutler Manufacturing Co. of Rochester, N. Y., which manufactures and installs its component parts.

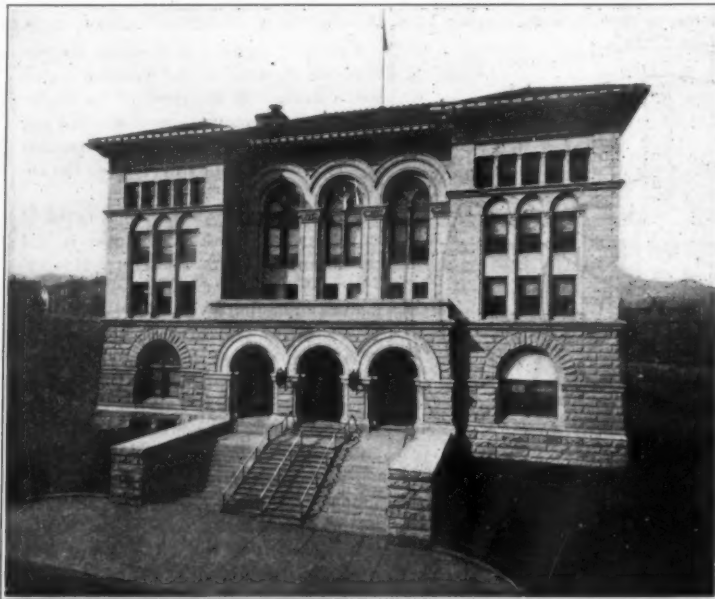
The Huntington Roofing Tile Co.

The Huntington Roofing Tile Co. is one of the industries that is helping to make the name of Huntington, W. Va., known the country over. In existence about seven years, the company has been conspicuously successful in making a product that meets the public demand, and Huntington roofing tile may be found today on hundreds of buildings—municipal and other public buildings and schoolhouses, and on private residences—in every part of the country between Maine and Montana and Iowa and Texas. One of the contracts which was particularly gratifying to the management was that for the United States postoffice at Helena, Mont., an illustration of which is given herewith.

There are several reasons for the success of the enterprise. One is that the practical man of the company, B. Tauber, has had long years of experience, and was thus able to introduce improved processes by which a better article is obtained, and at a less cost. Another is that the tile is made from a peculiar quality of shale, found only at Huntington, the whole deposit of which is owned or under lease to this company. This shale is very free from foreign matter, and with the company's patented process of crushing, mix-

made at this establishment, of the old shingle pattern, gives not only a fireproof and water-tight roof, but one that is practically everlasting. Requiring no special construction for their use, these tiles can be put on by any mechanic of ordinary skill. The color of the Huntington tile is a lively red of several shades, but the same color all the way through and never-fading.

The company also makes ridge and hip rolls and coverings, ridge saddles and tower, hip and gable finials of such shape and design as may be required.



FINISHED WITH HUNTINGTON ROOFING TILE.

ing and shaping, and with thorough burning and annealing, a uniform density is secured with less porosity and greater strength than are possessed by the ordinary shingle tile. It is declared that in competitive tests the Huntington roofing tile absorbed less than one-fifth of 1 per cent. of its weight after 21 hours' immersion, whereas some of the softer burnt tiles absorbed as much as 16 per cent. Well-burned, strong tile have lasted for centuries in the old country, and it is the claim of the management that the tile

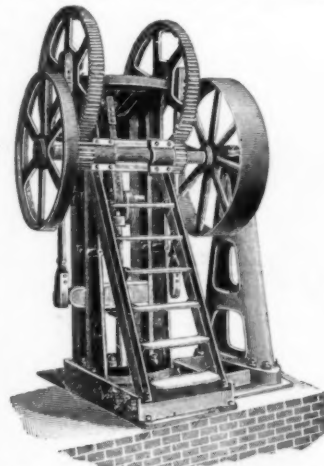
The capacity of the plant is 50 squares of tile a day. As a "square" is 10x10 square feet, that means 5000 square feet a day. And the business is constantly growing. The officers of the company are Robert L. Archer, president; C. S. Welch, vice-president; B. Tauber, secretary and treasurer.

ALBERT PHENIS.

The Downie Improved Pump.

An accompanying illustration presents a view of the latest improved double-acting, or two-stroke, deep-well working head

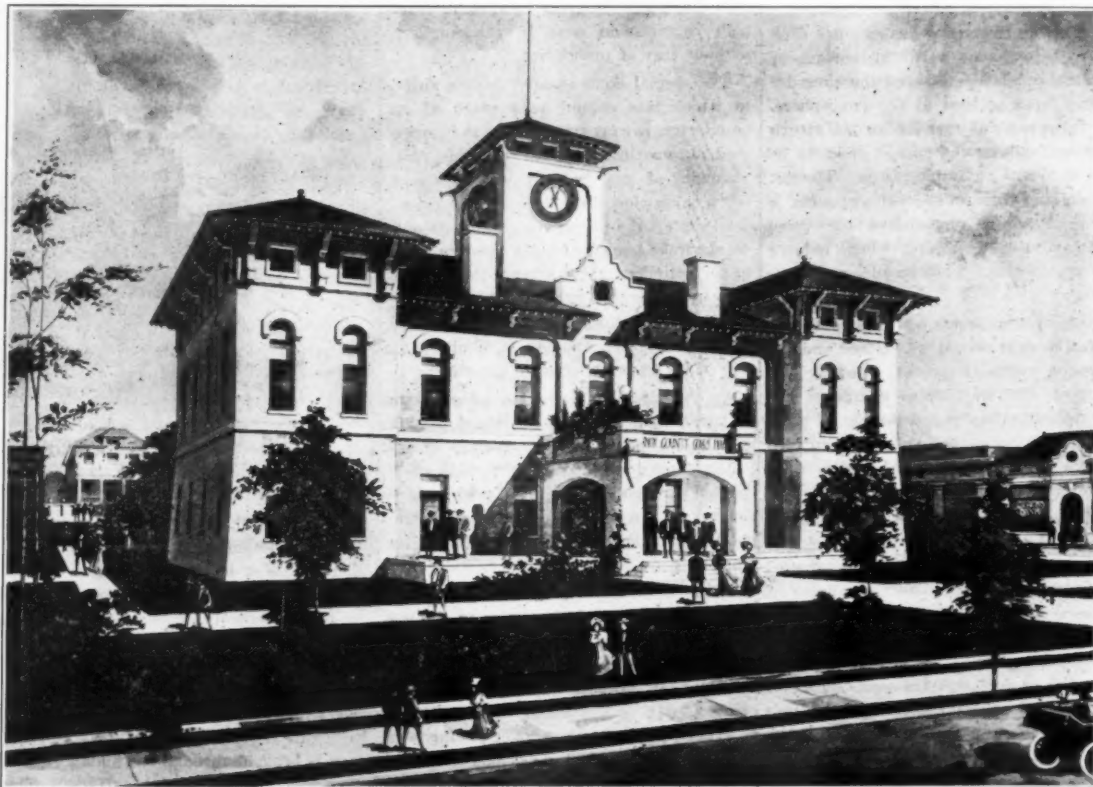
manufactured by the Downie Pump Co., Downieville, Pa. These pumps are largely used for city water-works, railroad pumping stations, large factories and where the supply is obtained from non-flowing artesian wells in large quantities. The main feature of this class of pump is that the water can be taken from any depth and forced to any reasonable height at one operation. Owing to the ingenious construction of the water pistons and the balanced double rods, they can be operated at a minimum of power. It is stated that tests to an efficiency of 85 per cent, and over of power expended on the belt have been obtained. The water is kept in a constant upward motion, and the pump



DOWNIE IMPROVED DOUBLE-ACTING DEEP-WELL PUMP.

throws a constant stream, which insures against water hammer and other annoyances when starting the load on each stroke. With this class of pump two times the amount of water can be taken out of a given-sized well than can be obtained with a single-stroke pump. They are especially adapted to be driven by electric motor, either belted or direct geared, gas or gasoline engine, steam engine, line shaft etc., and are built in several sizes, ranging in capacities from 50 gallons per minute to 600 gallons per minute.

The company is now filling some large orders for Fairbanks, Morse & Co., Chicago, Ill.; Allis-Chalmers Company, Mil-



KNOX COUNTY COURTHOUSE AT BARBOURVILLE, KY.
The Frank P. Milburn Company, Architect, Washington, D. C.

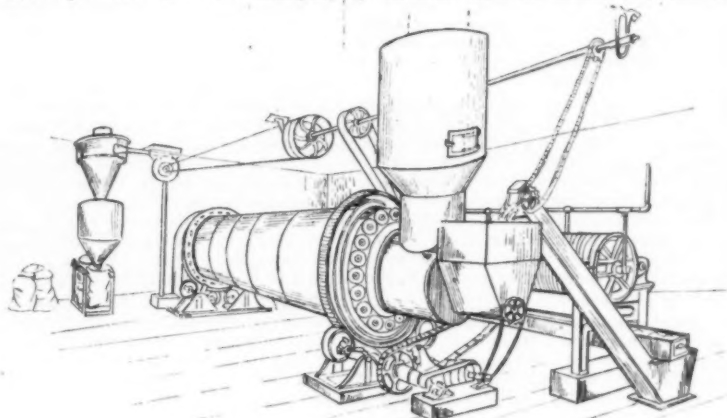
waukee, Wis., and the Eastern Steel Co. of Pottsville, Pa., who recognize the merits of this class of pump. The Downie Pump Co. also manufactures a complete line of double and single-stroke pumps to be operated by steam direct, as well as a complete line of single-stroke geared pumps.

Biles Steam Drier and Press.

The well-known designer and manufacturer of drying-machinery presses, the Biles Drier Co. of Louisville, Ky., has received two new patents, one on rotary direct-heat driers, principally for minerals, and another on rotary steam driers for all such other materials as cannot be dried by direct heat. An accompanying

the heat radiated without obstruction. In the larger sizes it is desirable to build up the laminations in sections so that the framework must be reinforced across the outer surfaces of the core by ribs, to which the punchings are secured. These ribs are of liberal strength, but properly proportioned, so that nearly all of the outer surfaces of the laminations are exposed to the air.

In the smaller sizes it has been possible to do away with these cast-iron ribs and hold the frame together by means of a riveted construction, which leaves the laminated iron core freely exposed to the air around its entire periphery. In this way it is unnecessary to use end castings of greater diameter than the laminations, and thus



BILES STEAM DRIER AND PRESS.

illustration shows a Biles steam drier and press as they appear installed ready for operation. In connection with this equipment it may be stated that the Biles Drier Co. is prepared to dry all animal, compound, mineral and vegetable matter, and, among other articles, has made a success drying distillery and brewery slop or spent grains with the steam drier.

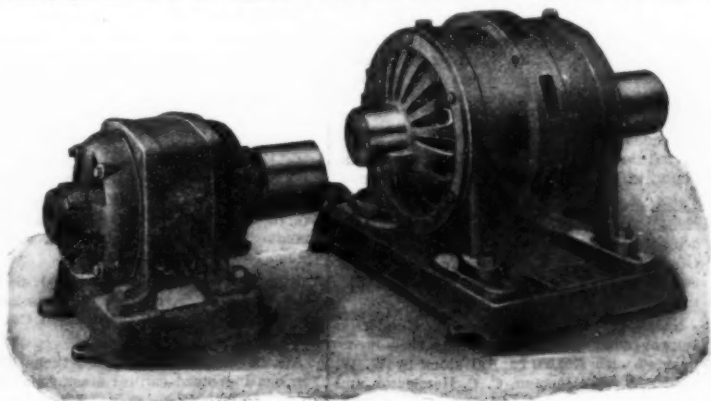
New Polyphase Induction Motors.

There are but few branches of engineering in which the art of the designer and his ability by persistent effort to improve and perfect are demonstrated more strikingly than in electrical apparatus. Particularly prominent in this respect is the

the dimensions and weights of the motors are greatly reduced. The design and construction are such that the assembled structure is made absolutely rigid and incapable of distortion.

The laminations are of the best quality of iron, carefully annealed and individually japped to prevent the circulation of eddy currents.

The field windings consist of form-wound coils carefully proportioned, so that when they are in place there are no undue strains on the insulation. Carefully selected insulating material is used, and by a special process the field winding as a whole is thoroughly saturated with a suitable insulating compound after it has been



TWO-HORSE-POWER POLYPHASE MOTOR AND A TYPE BUILT 15 YEARS AGO.

induction motor. The design and method of construction applying to the small sizes of polyphase motors built by the Stanley-G. I. Electric Manufacturing Co. of Pittsfield, Mass., brings out this fact to a remarkable degree.

The original method of induction-motor construction, and one commonly used by most manufacturers even now, was to support and completely surround the motor proper, consisting of the laminated iron core and the windings, in a frame or box of cast iron.

The method used by the Stanley-G. I. people is to support the active material, consisting of laminated iron core and windings, in frames so designed that the laminations are freely exposed to the air and

placed in the slots, making it practically moisture proof. This special treatment also holds the individual wires in place, so as to prevent any possible chafing of one wire upon another, and furthermore very greatly assists in the conduction of the heat from the interior to the exterior of the coils, where it is carried away by means of ventilation and radiation.

The heads or end shields, which contain the motor bearings, are bolted to the frame. They are so arranged that by bolting them on in different positions the motor may be operated on the floor, wall or ceiling without any other change, the oil reservoirs being kept in a horizontal position. These shields are carefully proportioned and of such stiff construction as

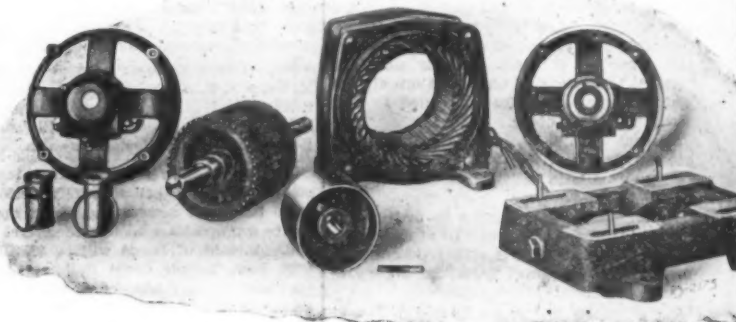
to hold the bearings, and therefore the motor armature, absolutely in position. They are also so shaped as to entirely protect the ends of the motor coils.

The bearings are self-aligning and of liberal proportions, so as to reduce their wear to a minimum. They are oiled by means of rings, and the oil reservoirs carry an ample supply of oil. Gauges which indicate the amount of oil in the reservoir and tapes for drawing off the oil are provided.

The armature or rotor is of the short-circuited or squirrel-cage type. No switches or moving electrical contacts whatever are used, so that the motor is

strains. The base may be used with equal readiness for floor, wall or ceiling mounting, and for horizontal or vertical belting.

The advantages of the design described are apparent. The motors are light in weight, and therefore easily handled, and may be supported for operation in places where heavier motors could not be used. The small dimensions are in many cases of great advantage. This is particularly true where the motor is to be direct connected to or built into a machine which it is to drive. In electrical design, that is, the proportioning of the active material, every advantage has been taken of experimental

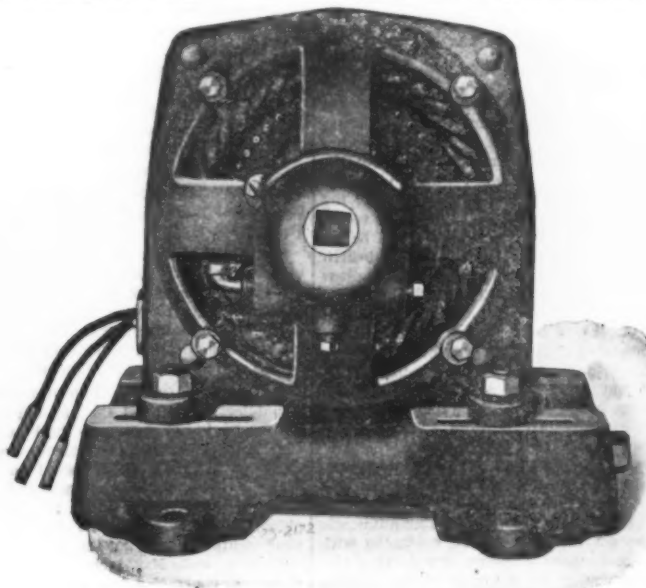


DISASSEMBLED VIEW OF THREE-HORSE-POWER MOTOR.

unaffected by dust or dirt. Furthermore, there is no danger from electric sparks. The laminated punchings are mounted directly on the shaft and held in place by an exceedingly simple and ingenious arrangement. The armature bars or conductors are placed in the slots, and the overhanging portions of the teeth assist in preventing the bars from being displaced by centrifugal force. The rings on the ends of the armature which short-circuit the bars are so fastened to them as to reduce the resistance of contact to a minimum. The free radiation of the heat is greatly facilitated by the use of several thin discs instead of a single solid ring.

research and the most recent advances in theoretical electrical science, with a view to reducing the amount of material and improving the performance characteristics. Particular attention is called to the fact that this design secures a motor of small dimensions and light weight, not so much by a reduction of the motor proper as by the curtailment of the material which is of no active value. Every particle of the material included is put to valuable use.

Special attention has been given to the question of heating. The exposed arrangement of the laminations and the provisions for ventilation assure low operating temperatures not only upon the exterior, but



THREE-HORSE-POWER POLYPHASE INDUCTION MOTOR.

The feet of the motor are a part of the end-frame casting and are spread well apart so as to give the motor a substantial base. These end castings are carefully proportioned and so designed that they are exceedingly stiff and rigid.

With each motor is furnished a cast-iron sliding base with an adjusting screw for tightening the belt. This screw is located centrally, exerting an even pressure. The movable parts of the base, to which the motor feet are bolted, are connected together underneath by an iron web, which eliminates all distorting

in the interior, where high temperature frequently exists undetected. These motors are guaranteed to operate continuously at full rated output without the temperature rise of any part exceeding 40 degrees C., and for two hours at 25 per cent. overload without the temperature rise exceeding 55 degrees C. above the surrounding air. Great care has also been used to obtain not only large starting torque, but also high efficiency and power factor and excellent speed regulation. Three views of the new motors and parts are presented herewith.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

ALABAMA.

Birmingham—Iron-furnace and Steel-plant Improvements.—The Tennessee Coal, Iron & Railroad Co. has authorized announcements as to its proposed extensive improvements previously referred to. These betterments may be briefly outlined as follows: Doubling the capacity of the open-hearth plant at Ensley by extending the duplex system; the present Bessemer converter will be reconstructed and a second converter will be installed in connection with new open-hearth furnaces to be built at the end of the present group; another mixer and additional cupola capacity will be provided, while a number of new boilers and additional gas producers are contemplated. The number of new open-hearth furnaces has not been definitely decided, but after they are completed the 10 existing furnaces will be replaced one by one with entirely new units. The company intends to build the new furnaces, their capacity to be 25,000 tons per month, during the coming year. In the rail mill alterations will be made increasing the rolling capacity, the improvements to include installing automatic stokers for the steam plant, equipping with additional cranes, building new soaking pits and increasing the capacity of the present pit furnaces. A central electric-power station will be constructed, the generators to be driven by gas engines operating with blast-furnace gas, for the entire Ensley plant. Furnace No. 5, now being reconstructed, will probably resume operations in July. Furnace No. 4 is also being reconstructed and improved by the installation of an automatic charging equipment, a skip hoist, a Brown patent top and bins for raw materials. Furnaces Nos. 5 and 6 are being similarly improved. For the Ensley furnaces additional engines and boilers are also being installed. A total of about \$2,500,000 is to be expended during the next year; company's offices at Birmingham, Ala., and 100 Broadway, New York city; Mr. John A. Topping, president.

Birmingham—Machinery Manufacturing.—Schaefer Manufacturing Co. has been incorporated with \$50,000 capital stock. J. V.

Schaefer of Chicago, Ill., is president; William H. Stockman, vice-president; W. N. Johnson, secretary, all of Birmingham.

Birmingham—Coal Mines.—Eclipse Coal Co. has been incorporated with \$25,000 capital stock. W. B. Shackleford is president and treasurer; J. B. Bicknell, vice-president, and B. A. Treat, secretary.

Birmingham—Mineral Lands.—Washington Land Co. has been incorporated with \$100,000 capital stock by Morris Adler, Sam M. Adler and August Denvers, to acquire mineral lands.

Birmingham—Construction.—Birmingham Contracting & Paving Co. has been incorporated with \$8000 capital stock by Eugene Fies, John Donelson and Ralph Fies to engage in a general contracting business for municipal, railroad and other corporations.

Elba—Telephone System.—A. S. Douglas, J. M. Garrett, S. N. Rowe, W. H. Coston, H. R. Bradley and others have incorporated the Elba Telephone Co. with a capital stock of \$5000 to construct telephone system.

Greenville—Sewers and Street Improvements.—The city has definitely decided to issue bonds for sewers and street improvements, a proposition mentioned several weeks ago. Amount of bonds will be \$30,000. Arthur Pew, Temple Court Building, Atlanta, Ga., was recently referred to as reported to be preparing plans and specifications for construction of sewers in Greenville. Proposals for the bonds are to be opened July 16. See details in financial columns. J. J. McMullan is mayor.

Lamar County—Timber Development.—L. Brame of Jackson, Miss., representing a syndicate of Jackson capitalists, it is reported, has purchased 5700 acres of pine-land in Lamar county. It is stated that a company will be organized for its development.

Mobile—Land Improvement.—Choctaw Community Co. has been incorporated with \$100,000 capital stock. George J. Stevens of New Orleans, La., is president; W. M. Bogle, vice-president; T. L. Karn, secretary, both of Mobile, Ala., and Dr. Walter Oser of New Orleans, La., treasurer.

Montgomery—Sewerage System.—City has let the following contracts for sewerage certain streets: Crockett Paving Co. at \$11,022, Black-Laird Company at \$5093, and Mitchell Bros. at \$7212.

Montgomery—Sewerage System.—Bids will be received until July 5 for laying four sections of sanitary sewers; R. S. Williams, city treasurer.*

Selma—Oil Station.—It is reported that the Standard Oil Co. (main office, New York city) has purchased site on which to erect warehouse and plant for storing and distributing oil, to cost about \$30,000.

Selma—Bottling Works.—Selma Coca-Cola Bottling Co. has been incorporated with \$10,000 capital stock by W. N. Brown, W. A. Bellingrath and others.

Sylacauga—Water, Light and Sewer Extensions.—City will vote July 23 on a \$16,000 bond issue for extending water, light and sewerage system. No arrangements will be made as to engineer, etc., until after election. No additional machinery will be required. S. P. McDonald is mayor.

Thomas—Iron-furnace Improvements.—The Republic Iron & Steel Co. has appropriated \$500,000 for improvements to the Pioneer Iron Co. furnaces. These betterments are to include the overhauling of two furnaces, installing new blowing engines and stoves, building a ladle-house and a pig-casting machine, and providing ladle cars and other equipments for carrying the hot metal. Four 44x84-inch and 84x60-inch blowing engines have been contracted for. As the Ensley furnaces are not supplying sufficient metal for the adjoining steel plant of the Tennessee Coal, Iron & Railroad Co., it is intended to carry basic iron direct from the Thomas furnaces. At the Birmingham Rolling Mills, owned by the Republic Company, changes have been made so that, instead of casting small ingots in groups to be broken down and rolled in the adjoining mill, ingots of standard size will be cast and carried to the blooming mill of the Tennessee Company at Ensley, and there rolled into slabs and billets for finishing on the plate and bar mills at Birmingham. Two 35-ton open-hearth furnaces are operated at this latter Birmingham plant; offices of the Republic Company at Birmingham, Ala.; general offices, First National Bank Building, Chicago, Ill.

Tuscaloosa—Foundry and Machine Shop.—Strickland Bros. Machine Co. has not begun

the construction of foundry and machine shop previously mentioned to replace structure burned, but will shortly arrange for its erection, plans and specifications having been completed; to be of steel and brick, 88x200 feet.*

Woodlawn—Supplies.—Woodlawn Supply Co. has been incorporated with a capital of \$75,000 by E. Brewer, George Brewer, George Edmondson and others.

ARKANSAS.

Cerro Gordo—Lumber.—Incorporated: Bell-Edwards Lumber Co., with an authorized capital stock of \$100,000, by C. H. Bell, D. A. Edwards, R. P. Harris and associates.

Conway—Mills.—Incorporated: Hartley-Mills Company, with \$12,000 capital stock, by John Hartley, Maynard L. Hartley, W. B. Mills and associates.

Devall Bluff—Water-power-Electrical Plant. It is reported that James A. Omberg, Jr., of Memphis, Tenn., and associates are considering the development of the water-power of the White river at a point 110 miles from Memphis, Tenn., and the building of an electric plant for generating from 10,000 to 20,000 horse-power and its transmission by electricity to Memphis for light and power purposes. It is estimated that about \$1,000,000 will be expended.

Eureka Springs—Manufacturing, etc.—Eureka Springs Land & Manufacturing Co. has been incorporated with a capital stock of \$200,000; incorporators, W. H. Duff, W. M. Duncan, Charles W. Blair, G. H. McLaughlin and H. Littleton.

Fort Smith—Sewerage and Paving.—Board of Improvement for Sewer District No. 2 and Paving District No. 5 will let contract July 18 for constructing storm and sanitary sewers and brick paving in said districts (previously mentioned). Harry E. Kelley is chairman.*

Hot Springs—Land Development.—Hot Springs Development Co. has been incorporated with a capital stock of \$50,000; incorporators, W. D. Sadler, J. Underwood, Wm. H. Levin, Wiley W. Lowrey, Alfred T. and J. Bissell; general offices, Fort Smith, Ark.

Jonesboro—Tile Works.—T. D. Thatcher is promoting the organization of the Craighead County Tile Co., to have a capital stock of \$12,500, for the purpose of establishing tile factory.

Jonesboro—Water-works and Electric-light Plant.—City, it is reported, has purchased the local water-works and electric-light plant at \$175,000. Address The Mayor.

Little Rock—Publishing.—Little Rock Publishing Co. has been incorporated with \$45,000 capital stock. It has purchased the newspaper plant and franchise of the Arkansas Democrat. W. R. Casey is president; Geo. C. Naylor, vice-president and business manager; Clio Harper, secretary, and F. A. Naylor, treasurer.

Mammoth Spring—Cotton Mill.—It is reported that J. D. Kennedy & Co. of Memphis, Tenn., will form company to build cotton mill.

Marianna—Sewerage System.—Arrangements have been completed for constructing a sanitary sewer for Sewer Improvement District No. 1, and bids for same will be received until July 14. Max D. Miller is chairman board of sewer commissioners.*

Nashville—Lumber.—Brown & Henderson Improvement & Lumber Co. has been incorporated with \$100,000 capital stock by W. W. Brown, J. H. Hineon, C. C. Henderson and others.

Nashville—Distillery.—American Spirits Manufacturing Co. of Peoria, Ill., is reported as intending to establish a distillery to have a capacity of about 5000 gallons per day.

Pine Bluff—Electric-light Plant and Water-works.—City is considering the installation of municipal electric-light and water plant and contemplates the purchase of local plants. Address The Mayor.

Pinnacle—Soapstone Mining and Manufacturing.—Arkansas Soapstone & Refractories Manufacturing Co., referred to last week, was organized under the laws of South Dakota to mine soapstone in Salline county. The reduction plant and manufacturing facilities will be located at Pinnacle; capital stock \$300,000. Charles Tete, Jr., of Philadelphia, Pa., is president; F. T. von Albade of Chicago, Ill., vice-president, and Robert Kunstman, secretary and manager; main office, Room 36, Moore & Turner Building, Little Rock, Ark.

Texarkana—Naval Stores.—Grant Naval Stores Co. has been incorporated with \$50,000

capital stock. J. M. Bernardin is president, and R. L. Pritchard, secretary.

FLORIDA.

Ebb—Saw and Shingle Mill.—Wilder Bros. will erect a 20,000 capacity saw-mill and 20,000 capacity shingle mill; W. P. Peddy, engineer in charge. Mention was made of this enterprise last week.*

Gainesville—Cannery.—Central City Cannery is being organized to establish fruit and vegetable cannery with a daily capacity of 10,000 three-pound cans. W. L. Denham will be manager.

Jacksonville—Street-paving.—Board of Public Works will shortly let contract for paving 182,606 square yards of streets with brick and 47,484 square yards with macadam.

Key West—Electric-light, Power and Gas Plants.—Stone & Webster, 84 State street, Boston, Mass., have purchased the entire electric-railway and lighting business of the Key West Electric Co., and the company will be refinanced with \$1,000,000 capitalization. New money will be provided to re-equip the present power station, purchase new cars and equipment, extend the lighting system and develop the gas business under franchise owned by the company, and put the entire plant in the best operating condition.

Panama City (P. O. St. Andrew)—Gulf-coast Port.—The Gulf Coast Development Co. has been incorporated with W. J. Jackson of Chicago, Ill., president; R. L. McKenzie, Gay, Fla., vice-president, and G. M. West, St. Andrew, Fla., general manager, secretary and treasurer. This company proposes to establish a port to be known as Panama City. Various improvements will be undertaken, and a dock 1000 feet long is now in process of construction. G. M. West, general manager, can be addressed.

Pensacola—Electrical-power Plant.—Pensacola Shore Line & Power Co., incorporated by A. Ellasburg and others, will construct power plant to supply light and power for general use in connection with its proposed electric railway.

St. Petersburg—Land Improvement.—Bayborough Improvement Co. has been incorporated with \$50,000 capital stock. C. L. Howard is president; H. A. Murphy, vice-president; R. H. Thomas, secretary; T. K. Wilson, treasurer, and C. A. Harvey, general manager.

Tampa—Cigar Factory.—Chartered: Leonard, Hayman & Co., with S. B. Leonard of Tampa, president and treasurer; M. H. Hickox of Dallas, Texas, vice-president; G. B. Schmucker of Tampa, secretary.

Tampa—Bridge.—Virginia Bridge & Iron Co., Roanoke, Va., has contract to build bridge 116 feet long over the Hillsborough river for the Tampa Northern Railroad Co., mentioned last week. Benjamin Thompson is engineer in charge.

GEORGIA.

Ashburn—Land Improvement.—Evans Realty Co. has been incorporated with \$25,000 capital stock. John L. Evans is president; W. K. Jenkins, vice-president and general manager, and John B. Flechison, secretary-treasurer.

Ashburn—Land Improvement.—J. S. Betts, R. L. Betts, G. T. Betts and others have incorporated the Betts-Evans Land Co., with \$100,000 capital stock.

Athens—Electric Plant.—Athens Electric Co. has increased capital stock from \$125,000 to \$275,000.

Atlanta—Land Improvement.—Frank C. Owens of Greenville, S. C., has purchased 90 acres of land on the Peachtree road, but no arrangements have been made as yet for its development.

Atlanta—Cotton-stalk Products.—The Cotton Stalk Products Co. has been incorporated with a capital stock of \$15,000,000 for the purpose of manufacturing paper pulp and paper and other products from cotton stalks. It is being organized by W. W. Gibbs, Pennsylvania Building, Philadelphia, Pa., and Harvie Jordan of Atlanta will be president. Either Mr. Gibbs or Mr. Jordan can give information.

Boston—Electric-light Plant.—Town will vote July 31 on the issuance of \$10,500 electric-light bonds. Address Town Clerk.

Brunswick—Telephone System.—Southern Bell Telephone Co. is now installing proposed complete conduit system and building telephone exchange; main office, Atlanta, Ga.

Cartersville—Electric-light, Water and Gas

Plants.—City is now having plans and specifications prepared for erection of concrete and brick buildings to be equipped with machinery for electric lighting and for gas and water extensions. Proposals will be called for and the specifications can be seen after July 1. Paul Gilreath, mayor, is architect and engineer in charge. This city reported last week as voting a \$40,000 bond issue for these improvements.*

Dallas—Water-works.—Arthur Pew, consulting engineer, Atlanta, Ga., is making surveys for the construction of water-works, for which \$20,000 bond issue was reported voted May 31.

Dalton—Cotton Mill.—Elk Cotton Mill, recently reported incorporated, has organized with J. W. Barrett, president; F. T. Hardwick, vice-president; M. C. Foster, secretary, and J. E. Satterfield, treasurer. Site has been obtained. Plans for 7500-spindle yarn mill now being prepared. Address the secretary. Capital stock is \$200,000.

Columbus—Desk Factory, etc.—Columbus School Desk Co. has been organized with \$8000 capital stock to manufacture school desks, opera seats, church pews, etc. J. O. McBride is manager. Address P. O. Box 85.*

Grovania—Crate Factory.—R. L. Baird and associates contemplate establishing factory for the manufacture of peach crates.*

Harlem—Shingle Mill.—J. C. Hughes, R. F. D. No. 1, contemplates establishing shingle mill.*

Lagrange—Street Paving.—City has let contract to C. H. Griffin, representing Venable Bros., for paving with Belgian blocks the square and Main street from the square to Depot street, approximately 14,000 square yards.

Lagrange—Laundry.—C. C. Fawcett, mentioned last week as to establish laundry, will operate as the Lagrange Steam Laundry. Building has been secured and machinery purchased.

Lumpkin—Guano Factory.—Lumpkin Home Mixture Guano Co. has been incorporated with \$10,000 capital stock by H. Bussey, Arthur Bussey, O. C. Bullock and others.

Griffin—Steam Laundry.—Reports state that C. B. Turner, lately of Cedartown, Ga., has secured building and will install steam laundry plant at a cost of \$3500.

Macon—Brick Works.—The Empire Company, Thomas Hardeman, president, and Charles C. Williams, vice-president, has been organized to establish brick plant. It is stated that machinery has been ordered.

Monroe—Cotton Mill.—Walton Cotton Mills is reported as to increase capital by \$50,000 for the purpose of increasing present equipment 5000 spindles and 150 looms.

Monroe—Cotton Ginnery.—The Southern Cotton Oil Co., main offices 24 Broad street, New York city, is reported as intending to erect cotton ginnery to be ready for operation by the fall.

Nashville—Water-works and Electric-light Plant.—City will issue \$25,000 of bonds for installing water-works and electric-light plant referred to May 3. Address The Mayor.

Valdosta—Stationery.—W. C. Willis, W. L. Holder, E. D. Ferrell and associates have incorporated the Valdosta Stationery Co., with \$15,000 capital stock, to manufacture and deal in stationery.

KENTUCKY.

Bowling Green—Electric-power Plant.—The city will sell to the highest bidder franchise for the establishment of an electrical-power plant. Address The Mayor.

Covington—Brick Works.—T. W. Spinks and associates are arranging for the establishment of brick plant. Machinery has been ordered.

Covington—Street-paving.—City is reported as to grade, macadamize and curb May street from 16th to Boone streets, and also grade, curb and pave an alley south of 6th street. W. E. Gunn is city engineer.

Kentucky—Mineral and Timber Lands, etc. It is reported that W. K. McGinness and others of Pittsburg, Pa., have incorporated the Cumberland River Mining Co. with \$3,000,000 authorized capital stock to develop mineral and timber lands, gas lands, etc.

Lexington—Street Improvements.—Louisdes Cognets & Co. have contract to construct about 40,000 feet of cement paving and about 10,000 feet of cement curbing and gutters in Bell Place.

Louisville—Mining.—Edwards Mining Co. has been incorporated with \$60,000 capital stock by James R. Edwards, William Miller, John M. Rankin and others.

Louisville—Electric Plant.—D. X. Murphy & Bro., 250 5th street, are preparing plans for distributing station mentioned June 21 to be erected by Louisville Lighting Co., U. Sneed,

president; one story, steel and brick, and cost \$100,000.

Louisville—Realty Company.—Portland Realty Co. has been incorporated with \$25,000 capital stock by Henry Almstedt, Hardy Burton and others.

Louisville—Sewerage System.—Sewer Commission, Peter Atherton, chairman, has appointed Harrison P. Eddy, Worcester, Mass., consulting engineer for the construction of sewerage system, recently referred to, to cost \$4,000,000. Samuel M. Gray of Providence, R. I., is also consulting engineer.

Paris—Water-works.—Arrangements will be made for extending water mains in Main and Cypress streets. Newton Mitchell is superintendent of water-works.

LOUISIANA.

Belle Isle—Salt-mining.—It is reported that Wm. P. Luck of New Orleans, La., acting for Eastern capitalists, has purchased the American Salt Co. properties on Belle Isle at \$35,000 and is organizing a new company to continue the development of the salt deposits, as well as other minerals, on a larger scale.

Donaldsonville—Street-paving.—Town council has adopted ordinances for the paving of Mississippi street and Railroad avenue with asphalt. About \$50,000 will be expended. Address Town Clerk.

Eunice—Water-works.—Town has voted a five-mill tax for 10 years for the installation of water-works. Address Town Clerk.

Monroe—Steam Laundry.—I. Forscheimer of Summit, Miss., and L. Bendat of Yazoo City, Miss., are reported as to establish steam laundry.

Monroe—Timber Land.—Reports state that W. K. Ridcut has secured 12,669 acres of

land located in Ouachita and Caldwell parishes.

New Orleans—Coffee-roasting Plant.—William B. Burhenroad and J. Aron have purchased the plant of the Cane-Drew Company, and a new company will be organized.

New Orleans—Confectionery-Manufacturing.—New York Confectionery & Restaurant Co. has been incorporated with \$25,000 capital stock by N. Rombotis and others to manufacture confectionery, etc.

New Orleans—Clothing Factory.—A. Kory & Sons have purchased site on which to erect a four-story glass-front factory building to be equipped for increasing present capacity.

New Orleans—Ice Plant.—Metropolitan Ice Co. has been incorporated with \$125,000 capital stock. Charles D. Cottrell is president; Pasco Almerico, vice-president, and Charles H. Cottrell, secretary.

New Orleans—Oil Tanks.—Standard Oil Co. (main office, New York, N. Y.) is erecting a steel tank of 35,000 barrels capacity at its supply depot at Port Chalmette.

New Orleans—Manufacturing.—Camolin Granolithic Co. has been incorporated with \$50,000 capital stock to manufacture granolithic by J. E. Warner, George Biardone, Thomas S. Winston and associates.

New Orleans—Mining.—New Orleans Mining Corporation has applied for charter of incorporation for the purpose of mining, dealing in lands, etc.; capital stock \$40,000; incorporators, Rene H. Himel and others.

New Orleans—Milk Depot.—Louisiana Pure Milk Co. has been incorporated with \$10,000 capital stock. Robert Causse, Jr., is president; Jacob Slassing, vice-president, and John F. Slassing, secretary-treasurer.

New Orleans—Ice Plant.—Cosmopolitan Ice Co. is the title of company reported June 21 as incorporated with \$100,000 capital stock. It is proposed to establish plant of not less

than 100 tons daily capacity. S. La Rosa is president; A. P. Lehiro, vice-president; P. Montelepre, secretary; C. D. Cristina, treasurer, and H. A. Fiegel, general manager.

New Orleans—Chewing-gum Factory.—J. S. Codifer of Donaldsonville, La.; J. D. Elirish of Berwick, La., and associates, it is reported, are considering the erection of chewing-gum factory to cost \$100,000.

New Orleans—Trunk Company.—Royal Trunk Co. has been incorporated with \$5000 capital stock by A. D. Kern, C. C. Dallet and others.

Shreveport—Lumber Company.—Washburn Lumber Co. has been incorporated with \$25,000 capital stock. T. E. Stephenson is president and treasurer; D. A. Thompson, vice-president, and T. H. Thurmond, secretary.

Sulphur—Sulphur Mines and Oil Wells.—American Sulphur & Oil Co., A. L. Lyons, St. Louis, Mo., president, contemplates the development either for sulphur or oil of 4000 acres of land which it owns near Sulphur.

MARYLAND.

Baltimore—Solder Factory.—Samuel Johansen & Co., solder manufacturers, 737 East Pratt street, have awarded contract to W. T. Childs, 14 West 20th street, for general alterations to building at 208 and 210 President street, which will be occupied as a solder factory.

Baltimore—Storage Warehouse.—The Maryland Storage Co., 909 Calvert Building, Fayette and St. Paul streets, has called meeting of stockholders to ratify increase of capital stock from \$150,000 to \$250,000.

Baltimore—Locomotive Works.—Dispatches emanating from Philadelphia, Pa., state that a company will be organized with a capital

power. Its present maximum capacity is 16,000 horse-power. The company also expects to award contracts in September for installation of a 20,000-line automatic telephone switchboard at a cost of about \$1,250,000.

Chestertown—Electric-light and Power Plant.—Kent Traction Co. will construct a plant for furnishing electric lights, also power for the operation of proposed railway between Chestertown and Tolchester, Md. About \$80,000 will be expended. Alva A. Lamkin, 611 Equitable Building, Baltimore, Md., is the company's counsel.

Hagerstown—Marble Quarry.—Maryland Crema Marble Co. has been organized to develop marble quarries by Fred A. Wright, 3 Court Place.*

Hagerstown—Stone Quarry.—Fred A. Wright, 3 Court Place, has organized the Maryland Quarry Co. to produce crushed stone, pulverized stone, pulverized stone screenings; capacity 1500 tons daily.*

Hagerstown—Cement Plant, Limekilns, etc. Maryland Cement, Lime & Stone Co. has been organized by Fred A. Wright, 3 Court Place, for the manufacture of cement, lime, etc.*

MISSISSIPPI.

Biloxi—Fruit Cultivation and Canning.—It is reported that the Middleton Fruit Co. of Oakland, Cal., has purchased 400 acres of land, which will be planted in figs, oranges, grape fruit, etc., and will establish cannery for preserving the figs and small fruits. About \$40,000, it is stated, will be expended.

Brookhaven—Brick Works.—Brookhaven Brick Manufacturing Co. is the title of company previously reported organized with \$50,000 capital stock by Lucian E. Schilling of Magnolia, Miss., and others.

Bucatunna—Floral Nursery.—Incorporated: Southern Floral Nursery Co., with \$30,000 capital stock, by L. H. Read, J. P. Bridges and others.

Eupora—Cotton Gin.—Incorporated: Eupora Gin Co., with \$10,000 capital stock, by T. W. Ford, L. C. Phillips and others.

Gulfport—Hardware.—Poythress Hardware Co. has been incorporated with a capital stock of \$25,000; incorporators, I. N. H. Poythress, D. E. Bennett, H. L. Blackmar and others.

Jackson—Fertilizer-mixing Plant.—Planters' Fertilizer Co., reported incorporated June 21, will operate a fertilizer-mixing plant having a daily capacity of 200 tons; main building 100x150 feet. Between \$10,000 and \$15,000 will be invested.

Jackson—Gypsum Company.—C. N. Bancroft, J. Ehrman, J. L. Enoch and others have incorporated the Roman Nose Gypsum Co. with \$150,000 capital stock.

Okolona—Drainage Canal.—Chiquatoucha Drainage Commissioners of Chickasaw county have let contract to J. C. F. Sprankle of Fort Wayne, Ind., for constructing a canal 15 miles long and 16 feet wide for the drainage of a large area of lands subject to overflow by the Chiquatoucha creek. About \$36,000 will be expended and bonds will be issued in July. Gordon L. Greene of Aberdeen, Miss., is the surveyor and constructing engineer.

Philadelphia—Timber Development.—It is reported that Francis E. Maltros, James L. Snyder of Wellsboro, Pa., and associates have purchased 35,000 acres of timber land in Neeshoba and Winston counties for development. Arrangements, it is stated, will be made for the erection of saw-mill and the building of short-line railroad.

Vicksburg—Street-paving.—J. S. Allen of Greenville, Miss., has been appointed supervising engineer of proposed street-paving to be undertaken by the city.

Vicksburg—Dry-docks.—Finnie Dry-Dock Co. of Paducah, Ky., will remove docks, which are fully equipped, from Paducah to Vicksburg. They are sectional and have a capacity for lifting a boat 52x160 feet.

Yazoo City—Lumber Company.—J. T. Coney, J. B. Nalley and others have incorporated the Yazoo Valley Lumber Co. with \$30,000 capital stock.

MISSOURI.

Carthage—Mining.—Vestry Mining Co. has been incorporated with \$150,000 capital stock by F. B. Clark, G. W. Shelton and others.

Flag Springs—Distillery.—Chartered: Shores Distilling Co., with \$3000 capital stock, by J. A. Shores, Henry M. Bennett and Ellen Shores.

Kansas City—Cotton Mill.—Kansas City Cotton Mills Co., previously reported, is progressing with construction and improvement of buildings to be equipped for cotton-manufacturing. Some 10,000 spindles and complement of looms will be installed to start with, and eventually 100,000 spindles are expected

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to be operated. The machinery is being installed under the supervision of Frank P. Sheldon & Co. of Providence, R. I. A 100-ton cottonseed-oil mill and a 110-ton ice plant will also be operated, these plants being already in position. Witten McDonald is vice-president.

Kansas City—Electric Plant.—E. M. Reed, Charles E. Miller and others have incorporated the E. M. Reed Electric Co. with \$20,000 capital stock.

Kansas City—Manufacturing.—Burdett Manufacturing Co. has been incorporated with \$50,000 capital stock by E. H. Fenton, C. R. Haller and others.

Kansas City—Rubber and Belting Company.—Incorporated: **Kansas City Rubber & Belting Co.** has been incorporated with \$3000 capital stock by P. F. Bond, R. B. Katalman and others.

Sedalia—Water-works Improvement.—Sedalia Water & Light Co. is considering improvements to water-works, to consist principally of installation of new pumping engines and mains, and estimates for the work will be completed in about 30 days.

St. Louis—Publishing.—William Westmoreland, Charles W. Talley and others have incorporated the William Westmoreland Publishing Co. with \$20,000 capital stock.

St. Louis—Distillery.—Incorporated: **L. & A. Scharff Distilling Co.**, with \$250,000 capital stock, by Lazarus Scharff, Adolph Scharff and associates.

St. Louis—Wagon Works.—Uhlenhaut Bros. Wagon Co. has been incorporated with \$20,000 capital stock by Henry E. Uhlenhaut, William A. F. Uhlenhaut and others.

St. Louis—Vehicle Works, etc.—Duquemin Vehicle Co. has been incorporated with \$20,000 capital stock to manufacture vehicles, games, toys, etc.; incorporators, J. T. Cottle, Noel B. May and others.

St. Louis—Oil Company.—Winona Oil Co. has been incorporated with \$20,000 capital stock by Robert W. Morrison, John F. McKinney and others.

St. Louis—Bag and Fiber Manufacturing.—Incorporated: **Texas Bag & Fiber Co.**, with capital stock of \$100,000, for manufacturing bags, fiber, etc., by Judson S. Bemis, Stephen A. Bemis and Thomas J. McLemore of St. Louis, Robert J. Wood of New Orleans, La., and others.

St. Louis—Clothing Company.—Kasselbaum-Godfrey Clothing Co. has been incorporated with \$10,000 capital stock by A. M. Schilley, John C. Kasselbaum and others.

St. Louis—Lumber Company.—Chartered: **Sunny South Lumber Co.**, with \$25,000 capital stock, by F. A. Goodrich, C. M. McDaris, Edward McDaris and others.

St. Louis—Telephone System.—Suburban Telephone Co. has increased capital stock from \$100,000 to \$600,000. H. W. Karrenbrock is president.

St. Louis—Adding Machine.—Chartered: **Duplex Adding Machine Co.**, with \$100,000 capital stock, by R. L. Curzon, E. B. Seitz, C. J. Curzon and others, to manufacture and sell the Duplex adding machine.

St. Louis—Lumber Company.—Peter E. Wilson, Samuel H. Fullerton, John A. Rehels and others have incorporated the Wilson-Rehels-Lofes Lumber Co. with \$200,000 capital stock.

St. Louis—Land Improvement.—Melida Realty Co. has been incorporated with \$8000 capital stock by Isaac T. Cook, S. B. Lewis and others.

St. Louis—Municipal Improvements.—The expenditure of the proceeds of the sale of the bonds reported voted last week for municipal improvements will be under the direction of the Board of Public Improvements, A. J. O'Reilly, president. This bond issue will total \$11,500,000. It is for bridges, roads, sewers, hospitals, etc.

St. Louis—Lead and Zinc Mining.—Conservative Lead & Zinc Mining Co. has been incorporated with a capital stock of \$200,000; incorporators, Otto V. Murphy and L. B. Carroll.

St. Louis—Lumber.—Wilson-Rehels-Lofes Lumber Co. has been incorporated with a capital stock of \$200,000; incorporators, Peter E. Wilson, John H. Rehels, Henry G. Rolfe and others.

St. Louis—Construction.—Lindell Construction Co. has been incorporated with paid-up capital of \$3000; incorporators, Max Feary, Tuxedo, Mo.; John L. Parker and T. A. Morrey.

NORTH CAROLINA.

Bluff Falls—Water-power-Electrical Plant. It is reported that Messrs. Hugh MacRae & Co. of Wilmington, N. C., are about completing their plans for the development of Bluff Falls. This enterprise has been previously referred to by the Manufacturers' Record, and, ac-

cording to the latest statements, contract for the engineering of the construction work of building a dam to develop power and constructing a plant to transmit the power by electricity has been signed with W. R. Bonsal of Hamlet, N. C.

Carthage—Building Materials, etc.—Chartered: **Cornwall-Carolina Construction Co.**, with \$100,000 capital stock, by R. L. Burns of Carthage, H. B. Taylor and H. R. Taylor of Cornwall, N. Y., to manufacture building material and handle machinery.

Charlotte—Steam Laundry.—M. H. Epps will establish steam laundry to be operated as the Sanitary Laundry. A building has been secured and a portion of the machinery ordered.

Cherryville—Cotton Mill.—Melville Manufacturing Co., reported incorporated last week, will organize during the present week and arrange contracts for building and equipping a yarn mill; capital stock \$125,000. Address J. S. P. Carpenter.

Greensboro—Stove Foundry.—Glascok Stove & Manufacturing Co. has been incorporated with an authorized capital stock of \$100,000 by G. T. Glascok, T. A. Glascok, L. L. Glascok and others.

Greensboro—Lumber Company.—C. J. Angel, Claude Kiser and J. T. Penn have incorporated the South Atlantic Lumber Co. with \$50,000 authorized capital stock.

Lattimore—Jute-bagging Mill.—Pink Manufacturing Co., reported incorporated recently, will manufacture jute bagging. It has erected building and is installing machinery, for which contracts have been awarded; capital stock \$50,000.

Lexington—Excelsior Factory.—Lexington Excelsior Co. has been incorporated with \$25,000 capital stock.

Louisburg—Mattress Factory.—Tar River Manufacturing Co., reported incorporated June 21 with \$20,000 capital stock to manufacture mattresses, has secured four-story building, 60x100 feet, and installed machinery for a daily output of 100 mattresses. R. G. Allen will be president and treasurer, and J. W. Hollingsworth, manager.

Marshall—Cotton Mill.—Capitola Manufacturing Co., recently reported as to add 4000 spindles soon, has awarded contract for the new machinery. Its capital stock will be increased.

Matthews—Cotton Gin and Fertilizer Factory.—E. J. Heath, J. M. Barrett and others have incorporated the Matthews Manufacturing Co. with \$125,000 capital stock to operate cotton gin and fertilizer factory.

Murphy—Water-works.—Town will install water-works, supply to be obtained from mountain stream seven miles distant by means of pipe line. J. Q. Barker, consulting engineer, Andrews, N. C., can be addressed.*

Selma—Cotton Mill.—Lizzie Cotton Mills Co., reported incorporated last week, has elected M. C. Winston, president; D. B. Oliver, vice-president, and L. D. Debnam, secretary. Stuart W. Cramer of Charlotte, N. C., is engineer in charge, and a 10,000-spindle yarn mill will be built.

SOUTH CAROLINA.

Bamberg—Water-works.—City is reported as considering the installation of water-works. Address Mayor Dickson.

Bamberg—Water-works System.—The city contemplates the establishment of water-works system for the principal streets with a view of extending. Address The Mayor.

Gaffney—Improvement Company.—Chartered: **Mountain View Improvement Co.**, with \$50,000 capital stock, by A. N. Wood, D. C. Ross and others.

North Augusta—Concrete-block Factory.—Artificial Stone & Supply Co., recently organized with W. A. Cheekley, president; A. E. Barker, vice-president and manager; L. F. Verdery, secretary-treasurer, and G. H. Moyer, superintendent, has begun the manufacture of cement building blocks, paving blocks, bricks, coping, curbing and sidewalk tile; capital stock \$4000.

Rock Hill—Cotton Mill.—J. E. Sirrine, Greenville, S. C., will soon be ready for proposals on erection of Aragon Cotton Mills buildings; to be large enough for 20,000 spindles and 600 looms. (This enterprise mentioned last week.)

Spartanburg—Foundry and Machine Shop.—Russel-Compton Company, reported incorporated last week with capital stock of \$25,000, is composed of W. H. Russel and others. Contract has been awarded for entire plant. The company will also handle engines, boilers, iron and wood working machinery, agricultural implements and a general line of mill supplies.*

Spartanburg—Water-power-Electrical Plant. It is stated that Oscar Shanks of Pittsburg,

Pa., has begun work on his contract, recently obtained, for construction of a hydro-electric plant on Broad river, in Cherokee county, for the Spartanburg Electric Co. It was reported recently that Pittsburg capitalists had purchased control of the company and it has been reorganized with a capital stock of \$1,000,000 to carry out the original and additional plans.

TENNESSEE.

Bartlett—Land Improvement.—Ellendale Land Co. has been incorporated with \$200,000 capital stock for the development of the Orgill tract, containing 1700 acres, as suburban residence section; incorporators, Frederick Orgill, E. B. McHenry, W. A. Johnson, G. H. Phillips and others, all of Memphis, Tenn.

Chattanooga—Bridge and Street Improvements.—The lower board of the city council has authorized an appropriation of \$24,100 for street improvements and \$5000 additional for the 11th-street bridge. Address Robert Hooke, city engineer.

Chattanooga—Refining Plant.—The Tennessee Refining Co. of New York, W. E. Ragsdale, manager in Chattanooga, is reported as to develop kaolin, feldspar, tripoli, china clay and other materials, and to build a plant for refining the product ready for market. Reports state the plant will cost \$10,000 and have a capacity of 150 tons daily.

Chattanooga—Pump Works.—Luitwiler Pumping Engine Co., 707 North Main street, Los Angeles, Cal., manufacturer of pumps and pumping engines, has secured site for plant and will erect building 100x200 feet. Between \$35,000 and \$50,000 will be expended. (Company was mentioned June 14 as considering the establishment of plant.)

Dandridge—Road-building.—The contract mentioned in issue of June 21 let to the Oak Grove (Tenn.) Construction Co. covers the macadamizing of about 40 miles of road and the grading of about 90 miles. A \$200,000 bond issue was voted for building these roads. S. G. Phillips, Dandridge, Tenn., is engineer in charge.

Gainesboro—Water-power-Electrical Plant. The Gainesboro Railway & Power Co., J. B. Gentry of Baxter, president, is reported to have leased Cummins falls, about 10 miles from Gainesboro, for the purpose of establishing a power plant to operate in connection with its proposed electric railway from Baxter to Gainesboro.

Jackson—Electric-light and Power Plant.—Jackson Railway & Light Co. has been incorporated with \$600,000 capital stock by John Wisdom, Charles D. Lemkuhl, S. S. Bush, Attila Cox and Allan McDonald.

Jasper—Water-works.—Reports state that W. Q. Dinwoody will build water-works.

Knoxville—Gold-mining.—W. A. Cannon and others are organizing the Tennessee Copper & Gold Mining Co. to operate in the Coker creek gold fields. It is stated that Mr. Cannon owns 80 acres of land in this section, to be divided into two lots, one to be operated as a mill and the other as a placer proposition.

Knoxville—Street Improvements.—W. C. Croser, city engineer, has completed specifications for paving 11 improvement districts, and the estimated total cost of the work is \$199,307.10.

Maryville—Road Improvements.—An election will be held August 2 to vote on the \$100,000 bond issue reported last week for improving the roads in Blount county; Clay Cunningham, clerk.

Memphis—Levees.—St. Francis Levee Board, Harry Pharr, chief engineer, has awarded contract to R. L. Leonard for construction of 975,100 cubic yards of work on St. Francis levee, to cost about \$171,000.

Memphis—Sewerage System.—It is reported that the city will extend sewerage system at a cost of \$20,000. Address James A. Omberg, Jr., city engineer.

Memphis—Drug Factory.—Standard Family Remedy Co. has been incorporated with \$5000 capital stock by W. A. Boots, R. L. Taylor, J. Goldbaum and others.

Memphis—Electric and Gas Plants.—The Laclede Gas Co. of St. Louis, Mo., has begun work on the foundation of electric and gas plant for which site was recently purchased. (This enterprise was referred to June 7.)

Memphis—Grain Elevator.—Memphis Public Elevator Co., reported incorporated April 5, has completed organization with J. L. Lancaster, president; I. L. Graves, vice-president, and J. W. Canada, secretary-treasurer. An elevator with a storage capacity of 500,000 bushels will be erected.

Union City—Grain Company.—Woodland Grain Co. has been incorporated with \$9000 capital stock by J. D. Alexander, J. D. Jones and others.

Wildier—Coal-mining.—Fentress Coal & Coke Co. will erect power-house and install electrical machinery for mining and hauling coal; daily capacity 600 tons. All equipment has been purchased; office, Chamberlain Building, Chattanooga, Tenn. (Mention was made last week of improvements to be made at mines.)

TEXAS.

Ablene—Cement-block Factory.—Ablene Cement Stone Manufacturing Co., reported incorporated June 14, will manufacture cement building blocks; daily capacity 600. Seth Kirk is president; C. B. Scarborough, vice-president; J. Barnett, secretary, and Hugh Emerson, treasurer.

Agnes—Telephone System.—Chartered: **Agnes Union Telephone Co.**, with \$30,000 capital stock, by J. W. Moose, J. N. Frazier and others.

Applegate—Saw-mill.—H. P. Laughlin of Jefferson, Ohio, and associates, who recently purchased the Jasper County Lumber Co., are reported as to make improvements to plant, increasing the capacity. Mr. Laughlin and associates were mentioned June 7 as incorporating the Texas & Ohio Lumber Co. with \$200,000 capital stock.

Clifton—Water-works.—O'Neill Engineering Co., Dallas, Texas, is engineer of construction of water-works system, for which \$10,000 of bonds were reported voted November 22. All material has been purchased.

Corsicana—Cement Mines.—S. W. Bogy and associates contemplate organizing company for the development of cement deposits which they control near Corsicana.

Dallas—Electric Company.—Chartered: **Hunter-Farry Electric Co.**, with \$10,000 capital stock, by J. Peyton Hunter, J. S. Wylie and others.

Dallas—Scenic Railway.—Chartered: **Fair Park Scenic Railway Co.**, with \$30,000 capital stock, by A. H. Burns, H. Hill, R. L. Cameron and others.

Denison—Cotton Mill.—Denison Cotton Mills, now operating 12,135 spindles, has awarded contract for 140 looms and other machinery.

Dickinson—Macaroni Factory.—Magnolia Macaroni Manufacturing Co. of Houston, Texas, it is reported, will build a macaroni factory.

Estelline—Hardware.—J. H. Cristler, J. A. Johnson and others have incorporated the Johnson Hardware Co. with \$7500 capital stock.

Fort Worth—Bridge Company.—Incorporated: **Baker-Byars Bridge Co.**, with \$25,000 capital stock, by A. M. Baker, E. P. Byars and others.

Fort Worth—Land Improvement.—South Side Land Co. has been incorporated with \$50,000 capital stock by J. E. Murray, F. D. Boyd and others.

Fort Worth—Railroad and Bridge Construction.—J. M. C. Usher, D. J. Ehrlich and others have incorporated the Fidelity Construction Co. with \$600,000 capital stock.

Galveston—Electric-light and Steam Plant.—Galveston Electric Co., H. S. Cooper, manager, is considering improvements to steam and electric plants for increasing the capacity.

Hardin County—Timber Development.—C. S. Johnson and associates of Cleveland, Texas, are organizing company with \$100,000 capital stock to develop 6000 acres of timber land which they control in Hardin county. A saw-mill with a daily capacity of 40,000 feet will be erected.

Houston—Oil Wells.—Wardavster Oil Co. has been incorporated with a capital stock of \$10,000 by Thomas Ward, M. A. Davey and E. A. Stirling.

Houston—Land Improvements.—Myer-Cargill Realty Co. has been incorporated with a capital stock of \$30,000 to develop lands for residence purposes by Stirling Myer, T. A. Cargill and N. L. Mills.

Houston—Land Improvements.—Texas Land & Colonization Co. has been incorporated with a capital stock of \$15,000 by B. A. Armstrong, Herbert B. Hurd and associates.

Houston—Car-wheel Foundry.—Dickson Car Wheel Co. has purchased site 250x1500 feet on which to erect plant as mentioned last week, to consist of car-wheel foundry, general foundry and machine shop, all fireproof and modern construction. Wheel foundry will be 320x150 feet, concrete wall three feet above ground, then 15 feet of continuous sash, then two feet of tile or concrete with tile roof; inside of structure to be entirely of steel, no woodwork being used. Either a 96-inch or 102-inch cupola will be used to receive blast from a positive blower, electrically driven, direct connected; hot iron and hot wheels to be handled on an electrical surface tram; floor holts to be hydro-pneumatic. These will have two-way power, giv-

ing hoisting and lateral motions; floors to be straight line. Sixty annealing pits will be required at the start, each to have a capacity of 20 wheels and be in straight line with hoisting apparatus, either electrical or pneumatic. Two three-ton elevators of modern and economic type will be installed; also one wheel breaker with 2200-pound weight having 16-foot drop, one 10-ton reservoir ladle geared to be run by electricity, necessary tracks, 30-inch-gauge turntables, etc.; power plant to consist of one steam-driven air compressor, same to deliver 1000 cubic feet free air per minute with 120-pound pressure at tank, or two machines having same capacity; two air receivers having an approximate capacity of 600 cubic feet each; one 220-horse-power generator, alternating current and 110 volts; one 200-horse-power Corliss engine, four 100-horse-power water-tube boilers, one heater with sufficient capacity for the four boilers, two feed-water pumps each with a capacity of 400 horse-power, necessary motors, etc.; machinery to be direct connected in all cases where possible. The plant will have a daily capacity of 400 wheels, and bids are wanted on building and equipment.*

Houston—Water-works.—City has voted affirmatively the \$134,700 bond issue reported May 31 to be voted to purchase the stock of the Houston Water Co., the city having previously voted in favor of purchasing local plant. H. B. Rice is mayor.

Houston Heights—Textile Mill.—Reported that the Oriental Textile Mills will erect additional buildings and install new machinery.

Lancaster—Cotton Gin and Grist Mill.—Chartered: Farmers' Union Gin & Mill Co., with \$25,000 capital stock, by W. H. Johnson, Henry Bailey, E. C. Lacy and others.

Llano—Telephone System.—Texas Telegraph & Telephone Co. will expend \$15,000 in rebuilding and extending its system, mentioned last week. A. J. Miller is superintendent.

Mineral Wells—Land Improvement.—Oran Land Co. has been incorporated with \$25,000 capital stock by J. B. Mayfield, M. G. Mayfield and others.

Nacogdoches—Lumber Mill.—Blount Lumber Co. reported incorporated last week with \$60,000 capital stock, will build saw and planing mills, dry-kilns and 10 miles of railroad. The plant will have a daily capacity of 40,000 feet of lumber. Neither architect nor engineer have been selected.*

Paris—Foundry and Machine Shop.—Lee Totten, J. W. Totten, J. C. Turner and others have incorporated the North Texas Foundry & Machine Co. with \$25,000 capital stock.

Ranger—Lumber Company.—Edwards Lumber Co., capitalized at \$10,000, has been incorporated by Ambrose N. Edwards, Albert C. Willis and associates.

Sabine—Docks, etc.—Reports state that T. H. Robinson and associates are arranging for the construction of docks. It is also stated the building of a pleasure resort is contemplated.

San Angelo—Land Improvement.—Park Heights Realty Co. has been incorporated with a capital stock of \$30,000; incorporators, E. E. Garnett, E. E. Bailey, C. T. Paul, L. R. Knight and J. D. Garnett.

Sherman—Cotton Mill.—Sherman Cotton Mills, recently reported as to enlarge plant, has awarded contract for machinery which will add considerably to its capacity; present equipment 8000 spindles and 160 looms.

Vernon—Steel Bridge.—H. Mitchell of Weatherford, Texas, has contract to construct steel bridge 1540 feet long over the Pense river; cost \$30,000.

Winnboro—Lumber Plant.—R. G. Andrews Lumber Co., reported incorporated May 31 with \$50,000 capital stock, will operate an established saw-mill plant which has been purchased. A planing mill is being erected. Machinery has been purchased; R. G. Andrews, president and general manager.

VIRGINIA.

Alexandria—Cleaning Company.—Incorporated: Bruce Stone & Brick Structure Cleaning Co., with \$300,000 capital stock, by George M. Gant, Joseph W. Moyer and Joseph D. Wright, all of Washington, D. C.

Chatham—Ice Plant.—Morea Ice Co. has been incorporated with an authorized capital stock of \$10,000. William G. Miner is president; J. H. Pigg, vice-president, and J. M. Jones, secretary-treasurer.

Danville—Lumber Company.—Virginia Hardwood Lumber Co. has been incorporated with \$10,000 capital stock. John T. Watson is president and treasurer; Arthur E. Fox, general manager.

Finestle—Creamery.—It is reported that a company will be organized with \$6000 capital stock to establish a creamery, and K. Mac-

Kinzie of the R. H. Pollock Company, 404 St. Paul street, Baltimore, Md., is promoting the enterprise.

Glen Wilton—Iron Furnaces and Mines.—Princess Furnace Co., reported June 28 as organized and succeeding the Princess Iron Co., incorporated recently with a capital stock of \$500,000. It will continue the development of the iron mines and stone quarries and manufacture foundry iron at the furnace. Wm. W. Hearne, Real Estate Trust Building, Philadelphia, Pa., is president.

Independence—Electric and Milling Company.—Chartered: Independence Electric & Milling Co., with W. M. Warren, vice-president and general manager, and E. L. Lundy, treasurer.

Lols—Telephone System.—Lols Mutual Telephone Co. has been incorporated with J. M. Price, president; J. E. Stively, vice-president, both of Bealeton, Va., and George E. Bain of Lols, secretary-treasurer.

Norfolk—Street-paving.—Southern Contracting Co. is lowest bidder at \$68,577.40 for paving Main street with asphalt, and will probably be awarded contract.

Norfolk—Land Improvement.—Incorporated: Ocean View Boulevard Corporation, with \$25,000 capital stock. Robert W. Sturges of Tanner's Creek, Va., is president; John R. Simpson, vice-president, and Sidney L. Nushbaum, secretary-treasurer, both of Norfolk.

Onancock—Manufacturing.—Bennett-Marvell Manufacturing Co. has been incorporated with \$100,000 capital stock by Henry R. Bennett of Onancock, Roy Williams Marvell and Robert B. Cromer, both of Baltimore.

Pocahontas—Drug Company.—Citizens' Drug Co. has been incorporated with \$6000 capital stock. J. F. Ward is vice-president, and W. F. Morris, secretary-treasurer.

Radford—Sewerage System.—Arrangements have been completed for constructing sewerage system in Section No. 1, and bids for furnishing all materials, labor, etc., will be received until July 25; R. L. Jordan, city clerk; T. L. Pickle, chairman sewer committee.*

Richmond—Construction Company.—The Elmore-McLaren Construction Co. has been incorporated with a maximum capital stock of \$500,000; officers: M. Elmore, Hagerstown, Md., president; Percy B. McLaren, Baltimore, Md., vice-president; Edward P. Hill, Baltimore, Md., secretary and treasurer; Nicholas P. Bond, Baltimore, Md., manager; office of vice-president at 1305 Continental Building, Baltimore, Md.

Richmond—Manufacturing.—Chartered: Magic City Manufacturing Co., with \$50,000 capital stock. John H. Bear is president and general manager; Joe W. Hodges, vice-president, and E. L. Patterson, secretary-treasurer.

Scottsville—Bridge.—The town and the counties of Albemarle and Buckingham are completing arrangements for the construction of proposed bridge across the James river at Scottsville. Address Town Clerk.

Scottsville—Street-paving.—Town will arrange for laying new sidewalks to cost about \$3800. Address Town Clerk.

Sewell's Point—Coal Piers.—Reported that the Tidewater Railroad, Raymond Du Puy, general manager, Norfolk, Va., is having plans prepared for the construction of its proposed coal piers to cost about \$1,000,000 each; number to be constructed has not yet been determined.

WEST VIRGINIA.

Barboursville—Creamery.—Incorporated: Barboursville Star Creamery, with a capital stock of \$10,000, by James I. Kuhn, James F. Adams, J. J. Christian, James O. Harden and M. C. Johnson.

Bluefield—Street-paving.—Kelly Brothers, Portsmouth, Ohio, have contract at \$2.24 per yard for paving Bland street and Bluefield avenue.

Charleston—Coal and Iron Mines, Coke Ovens, etc.—James Flynn, W. W. Mucklow, E. P. Mucklow and others have incorporated the Triple State Investment Co. with \$25,000 capital stock.

Charleston—Land Improvement.—Fairview Land & Development Co. has been incorporated with an authorized capital stock of \$50,000 by D. C. Boyce, C. E. Rudesill, Daniel Matthews and associates.

Gilbert—Telephone System.—Chartered: Gilbert Telephone Co., with \$5000 capital stock. J. E. Stafford is president, and John C. Elkins, secretary-treasurer.*

Glenville—Coal Mines.—It is reported that J. S. Withers of Buckhannon, W. Va., has purchased 300 acres of coal land on the Little Kanawha river in Gilmer county.

Hinton—Foundry and Machine Shop.—Summers Foundry & Machine Co. has been incor-

porated with an authorized capital stock of \$10,000 by J. H. Miller, D. M. Meador, Lee Walker and others.

Huntington—Lumber Mills.—Gulf State Lumber Co. has been incorporated to manufacture lumber by P. A. Rutledge, M. E. Cummings, M. H. Richardson, W. M. Talley and H. C. Beebe; capital stock is \$5000.

Keyser—Railroad Repair Shops.—W. A. Liller has contract for rebuilding the repair shops for the Baltimore & Ohio Railroad Co., previously referred to; building to be 80x600 feet and 25 feet high.

Logan—Coal-mining.—The H. T. Wilson Coal Co. of Detroit, Mich., is reported to have leased 600 acres of coal land near Logan and to develop it immediately, contracts having been let for the construction of tipples, store and dwelling-houses, etc.

Mill Point—Lumber Company.—Cranberry Lumber Co. has been incorporated with \$10,000 capital stock by M. W. Cuthall of Rapidan, Va.; H. C. Browning of Washington, D. C., and associates.

Parkersburg—Brick Works.—U. S. Upson, S. E. Drummond and J. A. Dupuy have incorporated the Parkersburg Brick Works with \$50,000 authorized capital stock.

Parkersburg—Oil Wells.—Seaboard Petroleum Co. has been incorporated with \$2,000,000 authorized capital stock by Herbert S. Stout, George H. Gordon and associates.

Parkersburg—Machine and Pipe Shop.—Spence & Smith are erecting two-story brick building 26x60 feet for machine shop and pipe and nipple cutting shop, increasing the present facilities.

Sistersville—Glass Works.—Chartered: Wells Glass Co., with \$50,000 capital stock, by James Henaghan, H. E. Stephan, C. A. Krug and others.

Williamson—Coal Mines.—Reports state that the Hirsch Coal & Coke Co. of Cincinnati, Ohio, has taken over the Williamson (W. Va.) Coal & Coke Co., the Mate Creek Coal Co. of Matewan, W. Va., and the Borderland Coal Co. in Mingo county. Mines have a daily capacity of about 30 cars. N. & W. Coal & Coke Co. is also said to have been taken over.

INDIAN TERRITORY.

Atoka—Water-works.—Engineer has not been selected nor has any action been taken for the construction of water-works for which \$30,000 in bonds was recently reported voted, but it is expected that arrangements will be made soon. W. Bassett is mayor.

Jenks—Oil Tanks.—Prairie Oil & Gas Co., it is reported, is arranging for the building of a tank farm for the storage of oil.

Marlow—Electric-light Plant.—City is reported as considering the installation of electric-light plant to cost about \$25,000. Address The Mayor.

Poteau—Water-works.—City has decided upon the construction of the water-works recently reported as proposed; estimated expenditure \$20,000, and an election will be called to vote bonds for that amount; no other details decided. G. H. Witte is mayor.

Tulsa—Water System.—Tulsa Water, Light & Power Co. has voted a bond issue of \$300,000 to rebuild and extend water system.

OKLAHOMA TERRITORY.

Guthrie—Construction.—Mutual Construction & Extension Co. has incorporated with \$3,000,000 capital stock to build and operate telephone and telegraph exchanges; incorporators, William L. Baxter of El Reno, O. T.; Andrew Van Wormer of St. Louis, Mo., and Robert G. Rennan of Chicago, Ill.

Norman—Sewerage System and Water-works.—City is considering installing sewerage system and extending water-works. About \$35,000 will be expended; John G. Lindsay, mayor.

Oklahoma City—Sewerage System.—Reports state that plans and specifications are being prepared for the construction of a sanitary sewer system from Walker to Western avenue; W. C. Burke, city engineer.

Shawnee—Planing Mill.—Shawnee Planing Mill Co. has begun the erection of proposed two-story addition 80x85 feet. Equipment has been purchased.

Waurika—Brick and Tile Works.—Incorporated: Waurika Brick & Tile Co., with \$10,000 capital stock, by P. H. Milan, J. M. Dunn, Ben Baxter and associates.

Weatherford—Cement-plaster Factory.—White-Bone Cement Plaster Co. has been incorporated with \$25,000 capital stock by J. P. White, J. S. Bryan, A. D. Nickel and others.

BURNED.

Athens, La.—Athens Lumber Co.'s mill.
Atlanta, Ga.—Plant of Atlanta Spring Bed Co.; estimated loss \$15,000.

Atlanta, Ga.—Atlanta Iron & Brass Bed Co.'s plant; estimated loss \$25,000.

Baltimore, Md.—Carriage & Toy Co.'s factory at Calvert and Saratoga streets; loss about \$12,500.

Davis, I. T.—City jail building. Address The Mayor.

Durham, N. C.—Josiah Adkins' lumber mill; loss \$7000.

Kingwood, W. Va.—Municipal electric-light plant; loss \$8000. Address Town Clerk. Building and machinery owned by J. Frank Rodehaver; loss \$5000.

Pine Bluff, Ark.—Swift Packing Co.'s building damaged \$15,000. R. L. Evans is local manager.

Pollock, La.—Big Creek Lumber Co.'s plant.

Poplarville, Miss.—Chemical Charcoal Co.'s plant damaged \$15,000.

Salisbury, N. C.—Rowan Distilling Co.'s plant; loss \$10,000.

St. Louis, Mo.—Polar Wave Ice & Fuel Co.'s plant; estimated loss \$40,000.

Tuscaloosa, Ala.—James M. Yerby's cotton gin, grist mill and store building.

Waco, Texas.—Provident Building, damaged \$20,000; owned by Provident Assurance Co. of New York, N. Y. W. V. Forte is local manager.

Yazoo City, Miss.—Producers' Oil Mill; loss \$150,000.

BUILDING NOTES.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Abingdon, Va.—College Building.—C. G. Mitchell, Johnson City, Tenn., has completed plans for an additional story to be erected to Martha Washington College, Rev. M. D. Mitchell, president; cost \$7500. J. D. Weaver & Son and John H. Baylis, both of Johnson City, Tenn., are estimating on the construction. Bids to be opened July 1.*

Alexandria, Va.—Apartment-house.—A company has been organized with J. Marriott Hill of Alexandria, president; H. J. Blauvelt, secretary, and George B. White, treasurer, both of Washington, D. C., to own five-story apartment-house previously reported to be erected at a cost of \$125,000; capital stock \$150,000.

Alexandria, La.—Depot.—Construction work will begin at once on the freight depot, 36x136 feet, to be erected by the Louisiana & Arkansas Railroad, for which J. S. Casey of Texarkana, Texas, has contract.

Atlanta, Ga.—Clubhouse and Office Building.—Miles & Bradt have contract to erect clubhouse and office building for the Georgia Railway & Electric Co. after plans by Morgan & Dillon; three stories; brick with iron and glass front; cost \$30,000.

Baltimore, Md.—Store Building.—Referring to store building to be erected at 111 North Howard street by Mrs. Henry Barton Jacobs, 11 West Mt. Vernon Place, the following contractors are estimating on construction: Hopkins-Barnet Company, Calvert Building, Fayette and St. Paul streets; J. J. Walsh & Son, 1525 Maryland avenue; Henry S. Rippel, 7 Clay street; John Hiltz & Son, 3 Clay street; George Bunneke & Son, 305 St. Paul street; John Cowan, 106 West Madison street; Henry Smith & Sons Co., 116 South Register street, and J. W. Bishop Company, Worcester, Mass.; six stories, 28x90 feet; brick with stone trimmings; steel beams; electric wiring and fixtures; sanitary plumbing; heating system; elevator; bids to be in July 2; Wyatt & Nolting, architects, Builders' Exchange Building, 2 East Lexington street.

Baltimore, Md.—Warehouse.—The Gottschalk Company, wholesale liquor dealers, 1766 North Gay street, has awarded contract to D. M. Andrews, Vickers Building, 225 East German street, for the construction of warehouse at southwest corner Light and Balderston streets; five stories, 50x100 feet; brick with stone and terra-cotta trimmings; steel-frame fireproof construction; slag roof; electric wiring and fixtures; sanitary plumbing; steam-heating system; elevators; cost about \$50,000; Charles M. Anderson, architect, 324 North Charles street. This contract was reported as having been awarded to John Hiltz & Son, but it was annulled.

Baltimore, Md.—Storage Warehouse.—The Maryland Storage Co., 903 Calvert Building, St. Paul and Fayette streets, has contracted with the Western Maryland Railroad Co. to act as its terminal agent and store its freight, and will erect six-story fireproof storage warehouse, 100x200 feet, at York street and Battery avenue. E. Clay Timanus is president, and B. L. Henderson, secretary and treasurer.

Baltimore, Md.—Warehouse.—Referring to warehouse to be erected at 104 and 106 East Lombard street by F. H. Warner & Co., 15-19 East Camden street, the following contractors are estimating on construction: J. H. Miller, 110 Dover street; Willis & Mason, 324 West Biddle street; George Blake, Law Building, Courtland near Lexington street, and J. H. Walsh & Bro., 321 Clay street; four stories, 46x135 feet; brick with stone trimmings; structural iron and steel; slag roof; electric wiring and fixtures; sanitary plumbing; heating system; elevator; Henry Brauns, architect, Professional Building, 333 North Charles street.

Baltimore, Md.—Dwellings.—Edward J. Gallagher, 2808 Fairmount avenue east, will erect 28 two-story brick dwellings on Rose near Fayette street to cost about \$40,000.

Baltimore, Md.—Apartment-house.—Dr. Jas. Bacon, 2303 North Calvert street, has awarded contract to Scott Jackson, 2817 Remington avenue, for general alterations and remodeling dwellings at 2010 and 2012 North Charles street into apartment-house.

Baltimore, Md.—Dwellings.—T. F. Hare Company, care of Thomas R. Bond, 102 East Lexington street, will erect nine brick dwellings on 20th street between Kennedy avenue and Alsquith street.

Baltimore, Md.—School.—The Roland Park Company, Roland Park, will erect an addition to its school building, doubling its present size. Plans provide for gymnasium equipped with shower baths, physical and chemical laboratories and classrooms. Modern heating and ventilating system will be installed.

Baltimore, Md.—Warehouse.—John H. Ludwig, 300 Maryland Telephone Building, as agent for Hoffman Allen, 212 West Monument street, will erect warehouse at 123 South street; three stories, 30x70 feet; brick with stone trimmings; mill construction; slag roof; electric wiring and fixtures; sanitary plumbing; elevator.

Baltimore, Md.—Dwelling.—Joseph Y. Brattin, 319 East 22d street, has purchased lot at northeast corner St. Paul and 31st streets and will erect dwelling on the site, which is 25x142 feet.

Birmingham, Ala.—Warehouse.—International Harvester Co. of Chicago, with offices in Montgomery, Ala., and Nashville, Tenn., is reported as considering the erection of a warehouse to be used as a distributing station.

Blackstone, Va.—Hotel.—Ripberger Bros. are arranging for the erection of a three-story brick hotel 30x140 feet.

Bristol, Va.—Tenn.—College Building.—H. E. Martin has contract to erect building for Sullins College after plans by Tinsley & McCormick; four stories, 82x40 feet; brick; ordinary construction; steam heat; electric fixtures; cost \$12,000.

Brunswick, Ga.—Warehouse.—Southern Railway has had plans prepared and bids are being received for erection of proposed fireproof warehouse to rest on cement piles, 100x300 feet, and have three overhead tracks and a large crane for handling material direct from vessel; cost \$50,000; D. W. Lum, chief engineer, Washington, D. C.

Central City, Ky.—Bank Building.—E. B. Miller and R. L. Raabe, representing the National Deposit Bank, have purchased site on which a three-story brick building will be erected.

Charlotte, N. C.—Church.—Arrangements are being made for the erection of a Methodist church at Highland Park. D. E. Allen is chairman of building committee.

Charlotte, N. C.—Warehouse.—D. B. Springs & Co., 22 College street, have secured site on which to erect warehouse 50x100 feet.

Corsicana, Texas.—Business Building.—Weldman & McAwee will erect a two-story brick business building.

Chattanooga, Tenn.—Residences.—Chattanooga Implement & Manufacturing Co. has purchased site in East Chattanooga on which to erect 25 four and six-room dwellings and one brick building to contain from 16 to 20 rooms for employees. About \$35,000 will be expended.

Chester, S. C.—Building.—T. L. Eberhardt will erect two-story building 70x105 feet of cement blocks; first floor to contain five stores and second floor to be used as factory.*

Chickasha, I. T.—Business Building.—J. W. Speak and S. T. Bledsoe have let contract for the erection of two-story brick business building.

Clinton, Mo.—Church.—Jerome B. Legg of St. Louis, Mo., is preparing plans for edifice to be erected by the Clinton Baptist Church; 86x26 feet; brick, stone and wood; steam low pressure-heating plant, direct radiation; electric fixtures; cost \$22,000.

Coal City, Ala.—Warehouses.—Union Warehouse & Storage Co. has been organized with \$6000 capital stock by Henry Adams, J. F. Barber and associates to erect two cotton warehouses in St. Clair county of fireproof construction.*

Columbia, S. C.—Building.—George Waring has contract to erect building for Thos. Taylor; cost \$75,000.

Columbia, S. C.—Dwelling.—Arthur W. Hamby, 412 Loan and Exchange Bank, has completed plans for residence to be erected by Athol H. Miller.

Columbia, S. C.—Office Building.—Dr. Le Grand Guerry has had plans prepared by Arthur W. Hamby, 412 Loan and Exchange Bank, for office building; tile floors; paneled-oak wainscot; tile roofing; steam heat; electric fixtures; plumbing, etc.

Columbus, Ga.—Newspaper Building.—The Evening Ledger has purchased site on which it is stated a three-story building will be erected.

Comanche, I. T.—Opera-house.—J. F. Waymire has contract to erect opera-house for J. R. Leach; 50x90 feet; electric fixtures; cost \$10,000.*

Corsicana, Texas.—School Building.—The city council has ordered an election to vote on a \$13,000 bond issue for the erection of school building. Address The Mayor.

Corvinton, La.—School Building.—Town contemplates erection of two-story brick school building to cost \$25,000; C. Z. Williams, mayor.

Dallas, Texas.—Dwelling.—Sanguinetti, Staats & Hill have completed plans for J. T. Jones' proposed \$15,000 residence.

Dallas, Texas.—Clubhouse.—Crisman & Nesbit have contract to erect building previously mentioned for the Columbia Club. Lang & Wittchell prepared the plans.

Dallas, Texas.—Fair Building.—J. H. McHan has contract to erect poultry building at the State fair; cost \$4500.

Dallas, Texas.—Church.—Evangelical Lutheran Church has awarded contract to Theodore Beilharz for construction of church to cost \$10,000.

Dallas, Texas.—Building.—Fair Board will receive bids until July 2 for erection of horticultural building. Plans and specifications can be seen at office of Renard & Clark, architects, Wilson Building. Certified check for \$300 must accompany each bid. Usual rights reserved.

Dallas, Texas.—Building.—Gaston National Bank has purchased site 55x100 feet on which to erect an office building.

Dallas, Texas.—Warehouse.—Wells-Fargo Express Co. has permit for erection of proposed \$9000 warehouse.

Durham, N. C.—Business Building.—Capt. E. J. Parrish has awarded contract to O. F. & R. E. Wilkerson for the erection of three-story building; to have gray press-brick front, tile floors, etc.

Durham, N. C.—Church.—Main Street Methodist Church is reported as considering the erection of a \$100,000 edifice. Address The Pastor.

Elm Grove, W. Va.—Church.—George H. Dieringer, 1428 Market street, Wheeling, W. Va., is preparing plans for two-story edifice 54x58 feet, to be erected by the First M. E. Church; frame with slate roof, metal ceilings, etc.

Eufaula, Ala.—Opera-house.—J. B. Whitlock and associates have organized company for erection of opera-house.

Everman, Texas.—School Building.—City will erect school building. Address The Mayor.

Florence, S. C.—School Building.—J. F. Ong of Columbia, S. C., has contract at \$45,000 for the erection of graded-school building, previously mentioned.

Fort Myer, Va.—Hospital.—Arthur Cowsill, 307 Colorado Building, Washington, D. C., has contract at \$16,981 for erection of proposed isolation hospital.

Fort Worth, Texas.—Dwelling.—Jim Davies has contract to erect residence for E. C. Hoadley after plans by Smith & Schenk, Ateller Building; two stories; brick and frame; hot-air heating plant; hardwood floors; ice box; electric fixtures.

Fort Worth, Texas.—Dwelling.—Miss C. Schugart is having plans prepared by Smith & Schenk, Ateller Building, for a two-story frame residence.

Fort Worth, Texas.—Office Building.—Dr. Bacon Saunders, Fort Worth, Texas, has let contract to Buchanan & Gilder, Renolds Building, for 10-story steel-frame office building; ornamental iron, plastic ornament, marble work, press brick, stone, terra-cotta, elevators, etc.; Sanguinetti & Staats, Hoxie Building, architects.

Fort Worth, Texas.—Business and Office Building.—Buchanan & Gilder, Renolds Building, have contract to erect business and office building for T. B. Ellison of the Ellison Furniture Co., after plans by Sanguinetti & Staats, architects; three stories; press brick, terra-cotta, iron and steel; marble corridors; elevator, etc.

Frederick, Md.—Association Building.—A site has been secured and plans will be prepared at once for the erection of building for the Young Men's Christian Association, previously referred to. Address chairman of building committee.

Gatesville, Texas.—Warehouse.—The Farmers' Union of Coryell county will erect cotton warehouse. W. Biggs of Houston, Texas, can probably give information.

Gilliam, Mo.—School Building.—Board of Education, W. T. Swinney, president, will receive bids until June 30 for erection of a two-story pressed-brick school building 50x50 feet. Plans and specifications on file at office of board, also at office of B. J. Patrick, Brookfield, Mo. Certified check for \$100, payable to J. R. Kirk, must accompany each bid. Usual rights reserved.

Glenville, W. Va.—Bank and Office Building.—T. Marcellus Marshall, it is reported, will erect a two or three-story brick bank and office building, and is having plans prepared for same.

Glenville, W. Va.—Store Building.—W. D. Whitney is arranging for the erection of store building.

Gorman, Texas.—Church.—Bids will be received between July 1 and 15 for a brick church in accordance with plans on file at First National Bank; cost \$6000.

Greensboro, Ala.—Courthouse.—W. C. Christian, judge of probate, Hale county, will receive bids until August 6 for erection of courthouse. Plans and specifications on file in his office and at office of E. J. Ostling, architect, 32 Moses Building, Montgomery, Ala., or may be obtained from architect on deposit of certified check for \$25. Certified check for \$500, payable to W. C. Christian, judge of probate and chairman of court of county commissioners of Hale county, Alabama, must accompany each bid. Usual rights reserved.

Gulford College, N. C.—Dormitory.—Contract will be let August 1 for two-story dormitory for Guilford College, recently mentioned; ordinary construction; steam heat; electric lights; cost \$15,000; Hook & Rogers, Charlotte, N. C., architects.

Guthrie, O. T.—Courthouse.—Logan County Commissioners will hold a meeting July 2 to consider a proposition from Joseph W. McNeal to advance \$100,000 for the erection of courthouse.

Hammond, La.—Bank Building.—Mitchell & Weir have contract to erect building for Bank of Hammond, for which McKenzie & Goldstein of New Orleans, La., were mentioned May 31 as preparing plans; structure to be two stories and cost \$16,000.

High Point, N. C.—Building.—D. H. Baker has contract to erect building previously reported for J. J. Welch and Dr. D. A. Stanton after plans by Hook & Rogers, Charlotte, N. C.; steam heat; electric lights; cost \$12,500.

Houston, Texas.—Union Station.—Houston Belt & Terminal Co., Sam Lazarus, president, is having plans prepared for union passenger station reported March 1 to be erected and for which site has been secured.

Houston Heights, Texas.—Schools.—City will vote July 21 on a \$15,000 bond issue for erection of school buildings. Address The Mayor.

Houston, Texas.—School Building.—City Secretary will receive bids until July 9 for erection of a two-story and basement 12-room school building. Work to be let in four separate and distinct parts as follows: General work, plumbing, sewerage and gasfitting, steam heating and cement floor and sidewalks. All bids to be submitted on blank form as attached to specifications. Plans and specifications at office of city secretary or at office of Olle J. Lorehn, architect, Houston. Certified check for 2½ per cent. of amount of bid must accompany each bid for general work; a certified check for 10 per cent. of amount of bid must accompany each proposal for the remainder of work; checks made payable to H. B. Rice, mayor. Usual rights reserved.

Jackson, Miss.—Dwelling.—J. H. Merrill of Lac du Flambeau, Wis., has purchased site and is having plans prepared for the erection of a \$15,000 residence.

Jackson, Tenn.—Store Buildings.—Thomas I. Taylor has let contract for erection of four two-story brick store buildings; cost \$13,000.

Jackson, Tenn.—School Building.—City is considering plans for the erection of high-school building. Address The Mayor.

Jacksonville, Fla.—School Building.—Bids will be opened July 25 for the erection of two-story school building 64x80 feet; mill construction; electric fixtures; cost \$3000; W. B. Camp, 20 Main street, architect.

Jacksonville, Fla.—Dwelling.—Contract will be let July 10 for the erection of residence for M. S. Pollak after plans by W. B. Camp; two stories, 40x60 feet; mill construction with pebble-dash; hot-air heating plant; electric fixtures; cost \$10,000.*

Jacksonville, Fla.—Flats Building.—Mrs. Laura Smith, 718 Laura street, has had plans prepared by W. B. Camp, 20 Main street, for erection of two-story flat building 45 feet 6 inches by 83 feet; mill construction; cost \$3000.

Jasper, Ala.—Courthouse.—Walker County Commissioners have engaged J. W. Chamberlain of Birmingham, Ala., to prepare plans for remodeling and improving courthouse, referred to last week; fireproof construction; electric-lighting fixtures; character of heating plant not determined; estimated expenditure \$40,000.

Jefferson City, Mo.—Hotel.—George M. Todd Construction Co. is erecting hotel building (reported April 19) for J. A. Huegel after plans by Miller & Opel; 50x99 feet; partly fireproof; steam heat; electric and gas fixtures; electric elevators; cost \$50,000.

Kansas City, Mo.—Union Depot.—Jarvis Hunt of Chicago, Ill., has been commissioned to prepare plans and specifications for the erection of proposed union depot to cost \$2,000,000. The Kansas City Terminal Co., John M. Egan, Chicago, Ill., president, was recently reported as intending to organize for the erection of this structure and others.

Kansas City, Mo.—School Building.—Flanagan Bros. Manufacturing Co. has contract at \$45,585 for erection of Clay school building.

Keyser, W. Va.—Car Shed.—Contract for erection of car shed for Baltimore & Ohio Railroad has been awarded to W. A. Liller of Keyser; cost about \$30,000.

Keysville, Va.—Bank Building.—Bank of Keysville is arranging for erection of a two-story brick building on site recently purchased.

Knoxville, Tenn.—Apartment-house.—Mrs. Rachel Rodgers has secured permit for erection of proposed three-story apartment-house to cost \$16,000.

Lagrange, Ga.—Store Building.—Howard P. Park is having plans prepared for one-story brick building 25x100 feet.

Lawton, O. T.—Hotel.—Lawton Hotel Co. has adopted plans for proposed three-story brick hotel.

Lawton, O. T.—Hotel.—Sealed bids will be received until July 15 for the construction of four-story and basement hotel. Plans and specifications on file and bids to be received at office of F. H. Grugg, architect.

Lexington, Ky.—Hotel.—Phoenix Hotel Co. has commissioned Richards, McCarty & Bulford of Columbus, Ohio, to prepare plans for a new hotel building. It is estimated that about \$50,000 will be expended.

Lexington, Ky.—Tobacco Warehouse.—American Tobacco Co. has purchased site on which to erect warehouse with a holding capacity of 2000 hogsheds; main office, New York, N. Y.

Lexington, Ky.—Store Building.—Combs Lumber Co.'s contract, mentioned last week, for erecting buildings for Harting estate covers three-story structure; double stores; mill construction; hot-water-heating system; electric elevators; combination gas and electric lighting fixtures; cost \$35,000; plans and specifications by H. L. Rowe.

Lexington, Ky.—Cottages.—Foster Helm has let contract to the Combs Lumber Co. for erection of 10 two-story cottages.

Little Rock, Ark.—Church.—Alvin O'Neal will superintend the construction of edifice previously reported to be erected by Immanuel Baptist Church, O. J. Wade, pastor; brick veneer; seating capacity about 2000; hot-air heating plant; gas and electric fixtures; cost \$30,000; H. J. Harker, architect.

Louisia, Ky.—Hospital.—River View Hospital & Sanitarium Co. has been incorporated with \$10,000 capital stock by Dr. L. H. York, Dr. Morgan Baker and others to establish hospital. A building has been secured and A. C. Pigg commissioned to prepare plans for remodeling and enlarging.

Louisville, Ky.—Lodge Building.—Maury & Hillier, Board of Trade Building, have completed plans and will receive bids until July 7 for lodge building to be erected by U. B. F. and S. M. T.; four stories, 112x50 feet; brick with stone trimmings; concrete foundation; steam heat; electric fixtures; 2500-pound electric elevator 150 feet per minute; cost \$30,000.

Louisville, Ky.—Dwelling.—D. X. Murphy &

Bro., 250 5th street, are preparing plans for a two-story brick-veneered dwelling to be erected by Dr. Hugh Montgomery at a cost of \$5000.

Malone, Texas.—School Building.—The School Board wants plans for erection of school building for which \$7000 in bonds were reported voted June 14.

Memphis, Tenn.—Engine-house.—Bids will be received until July 5 at the office of Ennis M. Douglas, city register, for the erection of a two-story brick engine-house. Certified check for \$250 must accompany each bid. Plans and specifications can be seen at the offices of the architects, Chighizola, Hanker & Cairn, 636-638-640 Scimitar Building. Usual rights reserved.

Memphis, Tenn.—Warehouse.—M. J. Gallagher has contract to erect warehouse for J. Rose, for which L. M. Weathers & Co. were mentioned May 3 as preparing plans; 201x147 feet; mill construction; steam heat; electric lights; 6000-pound-capacity elevator.

Memphis, Tenn.—Newspaper Building.—Commercial Publishing Co., W. J. Crawford, president, will erect a four-story fireproof steel building 37x148 feet, with basement 16 feet in the clear by 148x156 feet, including sidewalk. All modern improvements for an up-to-date newspaper plant will be installed. About \$200,000 will be expended. Architect has not been engaged.

Memphis, Tenn.—Dwelling.—J. H. Moselage has contract to erect two-story residence for N. M. Woods after plans by Alsop & Woods; cost \$8000.

Memphis, Tenn.—Apartment-house.—Pritchard & Evans have contract to erect four-story apartment-house for A. L. Pritchard after plans by Alsop & Woods; cost \$10,000.

Meridian, Miss.—Building.—Fitzgerald & Germany have contract to erect three-story pressed-brick building for L. H. Arky; cost \$20,000.

Mill Creek, I. T.—School Building.—Town has voted the \$10,000 bond issue reported May 21 for erection of school building. Address Town Clerk.

Morgantown, W. Va.—Buildings.—Regents of the West Virginia University have made preliminary arrangements for erection of a girl's dormitory and the enlargement of Woodburn Hall.

Nashville, Ark.—School Building.—Plans by Charles E. Valkman of Texarkana, Ark., have been adopted for school building (previously reported), and bids for the erection will be opened July 15; building to be two stories, 85x82 feet, of brick.

Nashville, Ga.—School Building.—City is considering the issuance of \$5000 of bonds for the improvement of school buildings. Address The Mayor.

Middlesboro, Ky.—Cottages.—Virginia Iron, Coal & Coke Co. has let contract to R. F. Wagner & Son, Bristol, Va., for erection of 10 cottages.

Mineral Wells, Texas.—School Building.—City will erect a two-story school building; E. C. Highsmith, mayor.*

Muskogee, I. T.—Hotel.—Turner Hotel Co. has awarded contract to Charles Davis for the construction of four-story annex to cost \$50,000.

Nashville, Tenn.—Hotel.—New York parties, it is reported, have purchased site on which to erect a 10-story hotel to have 250 rooms and cost \$1,000,000, and will organize company to operate same. C. C. Christopher can probably give information.

Newbern, N. C.—Lodge Building.—Plans by C. L. Rose, Raleigh, N. C., have been adopted for lodge building reported June 14 to be erected by Newbern Lodge No. 764, B. P. O. E. Plans call for a five-story building 75x125 feet, of white compressed brick with stone trimmings; cost \$75,000.

New Iberia, La.—Business Building.—Taylor & Reynolds have contract to erect building for John R. Taylor after plans by Ephraim W. Phillips; two stories, of brick with iron and glass front and tiled roof.

New Orleans, La.—Building.—Philadelphia Ice Cream Co. will erect a four-story brick building to cost \$50,000.

New Orleans, La.—Hotel.—It is reported that the Cosmopolitan Hotel Co. will remodel building at an expenditure of \$20,000.

Norfolk, Va.—Warehouses.—Southern Bagging Co., B. & D. L. Margolius, proprietors, are having plans prepared by Breese & Mitchell for three warehouses; one three-story brick, 60x175 feet, and two one-story brick, 60x75 feet; semi-fireproof; mill construction; hand-power elevator; cost \$35,000. Plans will be ready for bids about July 1.

Norfolk, Va.—Church.—Episcopal Church of the Ascension has awarded contracts for the construction of proposed edifice. E. L. Myers

will have supervision of the construction; cost of building \$8200.

Oklahoma City, O. T.—Building.—Contract will be let August 1 for building previously reported to be erected by the Alexander Drug Co.; five stories, 100x120 feet; fireproof construction; steam heat; electric lights; electric elevators; cost \$75,000; J. W. Williams, architect.

Oklahoma City, O. T.—Building.—Union Trust Co. has secured permit for the erection of proposed two-story brick building, 75x60 feet, to cost \$10,000.

Oneonta, Ala.—Warehouse.—Oneonta Warehouse Co. has been organized with \$3000 capital stock. A warehouse 40x200 feet will be erected. John H. Donehoo is president; D. R. Blackwood, vice-president, and W. A. Weaver, secretary-treasurer.

Pawhuska, I. T.—Hotel.—Mrs. G. C. Bolton, Globe Hotel, Pawnee, O. T., is reported as proposing to build a hotel to cost \$10,000 at Pawhuska.

Pensacola, Fla.—School Building.—Board of Public Instruction has named A. V. Clubbs and John D. Randall as architects for school building recently mentioned; building to have 24 classrooms; hot-air-heating plant; electric lighting fixtures. Proposals for erection will be probably called during week of July 1.

Piedmont, W. Va.—Bank Building.—E. J. Fredlock Manufacturing Co. has contract to erect proposed building for the First National Bank.

Richmond, Va.—Theater and Hotel.—Terry B. Gordon of Norfolk, Va., has purchased site on which to erect theater and hotel building to cost about \$65,000. Ferguson & Calrow of Norfolk, Va., have been commissioned to draw plans for the structure.

Roanoke, Va.—School Building.—W. M. Seay & Son, Lynchburg, Va., have contract to erect school building after plans by Arnold Eberhard, Norfolk, Va.; two stories, 66x148 feet; slate roof; cost \$28,000.

Rockdale, Texas.—Cotton Warehouse.—Farmers' Union Warehouse Co. has been incorporated with \$5000 capital stock by G. A. Doss, E. E. Elland and others.

Rome, Ga.—Jail Building.—Commissioners of Roads and Revenue of Floyd county will open bids July 10 for the erection of a two and three-story building of stone, brick and steel with fireproof floors and ceiling. Minute plans and specifications on file in county commissioners' office in courthouse; also at office of J. W. Golucke & Co., architects, Temple Court Building, Atlanta, Ga. Certified check for \$500, payable to J. R. Cantrell, chairman county commissioners, must accompany each bid. Usual rights reserved.

Rosebud, Texas.—School Building.—Town has voted affirmatively the proposed \$15,000 bond issue for the erection of school building. Address Town Clerk.

Savannah, Ga.—Warehouse.—Wallin & Young are preparing plans for warehouse to be erected by National Biscuit Co. at a cost of \$10,000.

Savannah, Ga.—Apartment-houses.—Wallin & Young have completed plans for two three-story apartment-houses to be erected by Wimberly Jones De Renne; reinforced concrete; cost \$52,700.

Scotland Neck, N. C.—Building.—Construction work has begun on building for M. Hoffman & Bro., for which D. J. Rose & Co., Rocky Mount, N. C., have contract; two stories, 52x115 feet; fireproof; electric fixtures; hand-power elevator; cost \$12,000.

Siler City, N. C.—Store and Warehouse.—The Hardware Store, V. M. Dorsett, manager, is having plans prepared by J. H. Hopkins, Greensboro, N. C., for a brick store building, 60x100 feet, and a brick warehouse adjoining, 25x60 feet.*

Sistersville, W. Va.—School Building.—John J. Rea of Clarksburg, Ohio, has contract at \$30,876.50 for erection of two-story brick and stone school building, previously mentioned.

Southside, Tenn.—School Building.—C. B. Thornberg has contract for erection of proposed school building.

Starke, Fla.—Bank Building.—J. A. Wilson, Jacksonville, Fla., has contract to erect one-story white pressed-brick building for the Bank of Starke (mentioned May 17).

St. Augustine, Fla.—Courthouse, etc.—St. Johns County Commissioners will let contract July 21 for erection of courthouse and boiler-house. Plans and specifications on file at office of W. Wallace Snow, clerk of Circuit Court, or at office of McClure & Holmes, architects, 135 East Bay street, Jacksonville, Fla. Each bidder before obtaining a set of plans and specifications must deposit a certified check for \$500 with clerk, check to be made payable to B. Genovar,

chairman board of county commissioners. Usual rights reserved.

St. Louis, Mo.—Store Building.—Ely-Walker Dry Goods Co. has completed purchase of site on which to erect proposed seven-story fireproof building, for which plans have been prepared by Eames & Young.

St. Louis, Mo.—Store Building.—It is reported that the Mississippi Valley Trust Co. will erect store building to cost \$2,000,000. When completed the building will be occupied by Butler Brothers, 13th street and Washington avenue. Mauran, Russell & Garden, architects, are preparing plans and specifications.

St. Louis, Mo.—Laboratory.—J. D. Fitzgibbon has contract to erect medicinal laboratory for Brotherhood Realty Co. after plans by George W. Helmuth; two stories, 230x155 feet; brick; cost \$80,000.

St. Louis, Mo.—Building.—The Municipal Library Board is reported as completing arrangements for the erection of proposed \$1,000,000 Carnegie Library Building.

Sumter, S. C.—Courthouse.—Moise De Leon, Atlanta, Ga., has contract to erect courthouse previously reported for Sumter county; cost \$85,000. Edwards & Walter of Columbia, S. C., prepared the plans.

Sumter, S. C.—Store Building.—Lettner & Wilkins, 408-410 Southern Building, Wilmington, N. C., are preparing plans for four-story pressed-brick and stone building to be erected by John E. Whilden at a cost of \$20,000. Steam heat will be installed.

Taylor, Texas.—Store Building.—T. W. Morse & Co. have let contract to J. O. Polhemus of Austin, Texas, for erection of addition to store building at an approximate cost, exclusive of fixtures, of \$10,000.

Temple, Texas.—Dwelling.—J. B. Nunneley has adopted plans for proposed \$10,000 cement-block residence.

Tulsa, I. T.—Depot.—St. Louis & San Francisco Railroad, J. F. Hinckley, St. Louis, Mo., chief engineer, has awarded contract to A. Anderson of St. Louis for the erection of depot to cost about \$35,000.

Velasco, Texas.—Hotel.—Surfside Hotel Co., mentioned last week as incorporated, has let contract to J. P. Norvell for erection of a four-story frame hotel building 60x100 feet; ordinary construction. Steam-heating plant and electric fixtures will be installed; cost \$100,000. E. Sylvan prepared the plans.

Washington, D. C.—Apartment-house.—S. W. Woodward of Woodward & Lothrop, 11th and F streets N. W., has purchased lot at 929 18th street N. W. and will erect a six-story brick addition to apartment-house adjoining.

Washington, D. C.—Apartment-house.—Mrs. Katharine Holt will erect apartment-house at corner 12th and East Capitol streets and Tennessee avenue; four stories and basement, 83.5x82x39.4 feet; brick with stone and terra-cotta trimmings; structural iron and steel; tin roof; electric wiring and fixtures; sanitary plumbing; steam-heating system; C. E. Webb, architect, Warder Building, 523 9th street. Estimates on construction are now being taken.

Washington, D. C.—Apartment-house.—Capital City Improvement Co., L. E. Breuninger, manager, 1122 Dartmouth street N. W., will erect apartment-house at Columbia road and Ontario avenue; four stories and basement, 40x146 feet; brick and stone trimmings; structural iron and steel; slag roof; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost about \$55,000; N. R. Grimm, architect, 627 F street N. W.

Washington, D. C.—Church.—The Church of Pilgrims, Congregational, David W. Montgomery, pastor, 804 I street N. W., will erect church building at Massachusetts avenue, 8th and B streets N. E. to cost about \$35,000; one story and basement, 40x70x82 feet; stone exterior; tile roof; structural iron and steel; electric wiring and fixtures; sanitary plumbing; heating system; James H. Warner, architect, 602 13th street N. W.

Washington, D. C.—Church.—W. A. Kimmel, 1516 Columbia road, was the lowest bidder and will likely receive the contract for the construction of building for Zion Lutheran Church, C. F. Bergner, pastor, 508 P street N. W., at 6th and P streets N. W.; one story, 44x76 feet; stone exterior; fireproof floor; electric wiring and fixtures; sanitary plumbing; heating system; cost about \$20,000; A. O. von Herbulis, architect, 1416 F street N. W.

Washington, D. C.—Church.—The Washington Heights Presbyterian Church, E. Lawrence Hunt, pastor, 1924 15th street N. W., has awarded contract to John H. Nolan, 1413 G street N. W., for the construction of an addition to its church building at Kalorama avenue and Columbia road, to cost about \$12,000. Electric wiring and fixtures and steam-heating system will be installed.

Washington, D. C.—Church.—Immanuel Baptist Church, Charles Werner, treasurer, 1348 Euclid avenue N. W., will erect church building in the vicinity of 16th street and Columbia road.

Washington, D. C.—Church Building.—The Bethany Baptist Congregation, Hugh Stevenson, pastor, 157 U street N. W., will erect Sunday-school room at northwest corner Rhode Island avenue and 2d street N. W.; one story and basement, 54x68 feet; stone exterior; electric wiring and fixtures; sanitary plumbing; heating system; Frank H. Jackson, architect, 1419 G street N. W.

Washington, D. C.—Dwellings.—E. S. Newman, 323 Bond Building, 14th and New York avenue N. W., has awarded contract to Burgess & Parsons, builders, 627 F street N. W., for the construction of two-and-one-half-story brick and stone dwelling at 1425 Harvard street, to cost about \$7500; George P. Hales, architect, 1430 V street N. W.

Washington, D. C.—Dwellings.—Harry Wardman, builders, 717 14th street N. W., will erect 10 two and one-story frame dwellings at 1465, 16, 13, 17, 23 and 1506 Emerson street N. W., and 1429, 19, 34 and 35 Delaware street N. W. The buildings will be equipped with hot-water heating systems and cost about \$50,000; A. H. Beers, architect, 717 14th street N. W.

Washington, D. C.—Dwellings.—George S. Fraser, 1004 B street S. W., will erect seven two and three-story brick dwellings on B street and Virginia avenue S. W. Electric wiring and fixtures, sanitary plumbing and hot-water heating systems will be installed; Frank H. Jackson, architect, 1419 G street N. W.

Washington, D. C.—Dwellings.—C. C. Meads, contractor, 101 4th street N. E., will erect two two-and-one-half-story brick dwellings with hot-air heating systems at South Carolina and Kentucky avenues S. E.; C. E. Webb, architect, Warder Building, 523 9th street N. W.

Washington, D. C.—Dwellings.—F. A. Blundon, builder, 1220 G street N. W., will erect three two-story brick dwellings with hot-air heating system at 1919 and 1923 13th street N. W., to cost about \$12,000.

Washington, D. C.—Laboratory.—Richardson & Burgess, Colorado Building, 14th and G streets N. W., were the lowest bidders and will probably receive the contract for the construction of laboratory for the Carnegie Institution, Robert S. Woodward, president, Bond Building, 14th street and New York avenue N. W.; three stories, 52x100 feet; Indiana limestone exterior with granite base; steel beams and girders; tile roofing; reinforced concrete; interior marble; sheet-metal work; electric wiring; boiler and machinery, heating and ventilating system, electric and gas fixtures not included in contract; Wood, Donn & Deming, architects, 808 17th street N. W.

Washington, D. C.—Office Building.—John Miller, 1301 G street N. W., will erect three-story brick office building 24x87 feet at 710 12th street N. W.

Washington, D. C.—Office Building.—J. A. Lankford & Bro., builders, 6th street and Louisiana avenue N. W., will erect four-story brick and stone lodge and office building in the northwest section to cost about \$50,000.

Washington, D. C.—Office Building.—Robert O. Holtzman, 941 F street, has awarded contract to W. H. Turton, builder, for the construction of office building at 1426 New York avenue N. W.; three stories and basement, 25x80 feet; brick with stone trimmings; steel beams; electric wiring and fixtures; sanitary plumbing; heating system.

Washington, D. C.—Store Building.—A. Zichtl & Co., 1012 Pennsylvania avenue, has awarded contract to W. E. Spelr Company, 1342 New York avenue, for the construction of store building at 1005 E street N. W.; three stories, 20x66 feet; brick with stone trimmings; galvanized-iron cornice; steel beams; electric wiring and fixtures; sanitary plumbing; heating system; Henry J. Blauvelt, architect, 918 F street N. W.

Washington, D. C.—Store Building.—Caroline King & Sons, 810-816 7th street N. W., have awarded contract to Thomas J. King, 32 Q street N. W., for general alterations and remodeling store buildings at 810-814 7th street N. W. Structural iron and steel and electric wiring and fixtures will be installed; cost about \$9000; Frank H. Jackson, architect, 1419 G street N. W.

Washington, D. C.—Store Building.—Chas. Kaufman & Sons, 431 7th street N. W., has commissioned Oscar G. Vogt, architect, Corcoran Building, 15th and F streets N. W., to prepare plans and specifications for alterations and additions to their store building at 431 7th street N. W.

Washington, D. C.—Store Building.—Oscar

G. Vogt, architect, Corcoran Building, 15th and F streets N. W., has been commissioned to prepare plans and specifications for remodeling throughout four-story brick store building at 1313 New York avenue N. W. Steam-heating system, electric wiring and fixtures and sanitary plumbing will be installed.

C.—Store Building.—Chas. A. Shields, 405 F street, will remodel store and apartment building at 1224 14th street N. W. Sanitary plumbing, electric wiring and fixtures and steam-heating system will be installed; C. E. Webb, architect, Warder Building, 523 9th street.

Washington, D. C.—Store Buildings.—The estate of B. H. Warder has awarded contract to J. Paul Smith, 1756 P street N. W., for the construction of six one-story brick store buildings at 3410-3420 M street N. W.; cost about \$10,000; Julius Wenig, architect, 655 New York avenue N. W.

Washington, D. C.—Store Buildings and Apartment-house.—Vincenzo Spicuzza, 1526 14th street N. W., has purchased lot at Rhode Island avenue, 1st and T streets, and will erect apartment-house and store buildings on the site.

Weatherford, Texas.—Pythian Castle.—Bids will be received until August 7 at office of Henry Miller, grand keeper of records and seal, Weatherford, for erection of two-story stone Pythian castle. Certified check for \$500, made payable to George G. Griggs, grand chancellor, must accompany each bid. Plans can be seen or applied for at office of Henry Miller, Weatherford, or C. H. Page, Jr., architect, Austin, Texas. Usual rights reserved.

Waycross, Ga.—Hotel.—T. W. Smith, Columbus, Ga., is preparing plans for \$100,000 hotel reported last week to be erected by the Waycross Hotel Co.

Weatherford, Texas.—Cotton Warehouse.—Farmers' Educational and Co-operative Union of Parker County will erect a fireproof cotton warehouse with a capacity of 1500 to 2500 bales; cost about \$3000.*

West Palm Beach, Fla.—Hotel.—George Zapf, proprietor of Seminole Hotel, has commissioned William Maughlin, architect, to prepare plans and specifications for remodeling the hotel and to prepare plans for grill-room.

West Palm Beach, Fla.—Livery Stable.—Anthony Brothers have awarded contract to Henry T. Grant for erection of stable building one story, high, 50x55 feet; artificial stone; fitted for storage of vehicles on one side and stalls on other, with hoisting equipment in the loft; Emil A. Elmann, architect.

West Palm Beach, Fla.—Hotel.—Emil A. Elmann, architect, has prepared plans and specifications for the enlargement and conversion of the Jefferson Block into a hotel. There will be a 30-foot addition, two stories, extending to a depth of 40 feet. Contractors are estimating.

Wilmington, N. C.—Store and Office Building.—James Woolvin is having plans prepared by Leitner & Wilkins, 409-410 Southern Building, for a three-story pressed-brick building to cost \$15,000.

RAILROAD CONSTRUCTION.

Railways.

Aberdeen, Miss.—Reported that the Illinois Central Railroad will survey to extend the Canton, Aberdeen & Nashville line about 100 miles to Sheffield, Ala. A. S. Baldwin is chief engineer at Chicago, Ill.

Ablene, Texas.—Ed. S. Hughes, president of the Abilene & Northern Railway Co., is reported as saying that 24 miles of grade have been completed and that tracklaying will begin in August. Line is to run from Abilene to Stamford, Texas.

Alexandria, La.—The Louisiana & Arkansas Railroad has completed its extension to Alexandria and has run its first train into the city.

Alexandria, La.—E. M. Peters of the Dalhoff Construction Co. is investigating the route for the proposed Rock Island extension from Alexandria to either Opelousas or Eunice, La., 55 miles, for which his firm is reported to have contract.

Anniston, Ala.—An ordinance is published to grant a franchise to the Atlanta & Birmingham Air Line to enter Anniston. This is the Seaboard Air Line, and the proposed branch, it is said, will run from either Jacksonville or Ocala. W. L. Seddon is chief engineer at Portsmouth, Va.

Asheville, N. C.—Edgington & Griffiths of Knoxville, Tenn., have, it is reported, been given the contract to grade the new yards for the Southern Railway at Asheville. About

250,000 cubic yards of earth will have to be moved.

Ashland, Ky.—Mr. Thomas Boggess, Jr., secretary of the Ashland Interurban Railway Co., informs the Manufacturers' Record that engineers are now in the field making surveys for the line, which will be 20 miles long.

Baltimore, Md.—The Manufacturers' Record is officially informed that the Maryland & Pennsylvania Railroad Co. proposes to build a connecting tract to the Baltimore & Ohio Railroad. This connection will run from the new freight yard on the Falls road south of the Peddicord stone quarry. Thos. M. Ward is chief engineer.

Brady, Texas.—The St. Louis & San Francisco Railroad will, it is reported, proceed to build the proposed extension from Brady to San Antonio, starting work within a month. The line will be from Brady to Fredericksburg, 40 miles, from which point a line has been graded to Waring, whence the Frisco will use the San Antonio & Aransas Pass Railway to San Antonio. J. F. Hincley is chief engineer at St. Louis, Mo.

Brownsville, Texas.—E. B. Gore, chief engineer, writes the Manufacturers' Record that location of the Brownsville, Hidalgo & Northern Railway is progressing as rapidly as conditions permit. The line will be 550 miles long. It is not believed that any considerable amount of work will be let before September. Address E. B. Gore, Brownsville, Texas.

Canton, N. C.—The Southern Railway Co. has, it is reported, let a contract to the Asheville Dray, Construction & Fuel Co., R. M. Ramsey, manager, for cutting down the grade at Fagg's Cut, near Canton, N. C.

Carthage, Mo.—The railway company represented by R. C. Rawlings, which has been granted a franchise in Carthage, proposes to build a line from Independence and Chanute, Kan., to Carthage, Webb City, Cartersville and Joplin, Mo. It will be altogether about 125 miles long, and it is proposed to have branches, the total length of which will also be about 125 miles.

Charleston, W. Va.—The Kanawha & Michigan Railway will, it is reported, lay heavy rail on about 40 miles of line from Charleston to Gauley Bridge. Some changes in alignment will also be made. C. Buxton, chief engineer of the Toledo & Ohio Central Railway, which controls the K. & M., can probably give information; address, Toledo, Ohio.

Chattanooga, Tenn.—C. H. Fluke of Detroit, Mich., general manager for the proposed electric railway from Nashville to Chattanooga, is reported as saying that all surveys into Chattanooga will shortly be completed, and that the third-rail system will be used.

Chester, S. C.—The Carolina & Northwestern Railway Co. is reported to have made surveys for an extension beyond Edgemont, N. C. L. T. Nichols is general manager at Chester, S. C.

Chestertown, Md.—The Kent Traction Co. has, it is announced, decided to operate its line with electric cars. The road will be about 10 miles long from Chestertown to Tolchester and Rock Hall. Alva A. Lamkin is counsel, with offices in the Equitable Building, Baltimore, Md.

Covington, Ky.—Reported that the Covington, Middlemarch, Fort Thomas & Alexandria Interurban Railway Co. has been incorporated to build a line from Covington via Fort Thomas and the Licking river to Alexandria, Ky., about 15 miles.

Cumberland, Md.—Survey for the Western Maryland extension is reported located between Cumberland and Uniontown, Pa., by G. W. Forry, G. C. Moore and others, easy grades having been obtained against loaded trains. Construction is expected to begin within a month or so.

Dublin, Ga.—J. J. Simpson, vice-president, Atlanta, Ga., is reported as saying that the Dublin & Southwestern Railway proposes to build a line from Eastman via Hookinsville to Cordele, Ga.

Fayetteville, N. C.—President John A. Mills of the Raleigh & Southport Railroad is reported as saying that by July 10 the line will be completed into Fayetteville. Track has been laid to a point within four miles of this place.

Fayetteville, N. C.—L. J. Phelps of New York has, it is reported, filed a mortgage for \$1,000,000 on the Cumberland & Randolph Railroad Co., lately incorporated with E. W. Shedd of Aberdeen, N. C., president, and T. J. Edwards of Providence, R. I., secretary. This company has purchased from the W. C. Petty estate a 99-year lease on the Cameron & Carthage Railroad, and it is said that the company will build from Cameron to Fayetteville, also from Carthage to Holiston and Shaw.

Fordyce, Ark.—The Rock Island, Arkansas & Louisiana Railroad, which has completed its line from Traskwood as far as Fordyce, about 55 miles, finished grading from Fordyce to Crossett and Eldorado, and track is now being laid.

Gadsden, Ala.—Reported that the Roberts & Abbott Company, engineers, of Cleveland, Ohio, E. P. Roberts, president, has been awarded the contract for engineering work on the proposed electric railway of the Tidewater Development Co. of Birmingham, Ala., J. M. Dewberry, president, which will build a line from Gadsden to Tuscaloosa, Ala., and other points, with a total length of 150 miles.

Gadsden, Ala.—Officers of the Seaboard Air Line, including the president and the chief engineer, have, it is reported, inspected the route for the proposed line into Gadsden, and rights of way are being obtained. W. L. Seddon is chief engineer at Portsmouth, Va.

Gainesville, Fla.—C. N. Adkinson of Kansas City has, it is reported, been appointed general manager of the Gainesville & Gulf Railway, which proposes to build an extension from Fairfield to Tampa.

Gainesboro, Tenn.—Reported that J. G. Gentry and others have incorporated the Gainesboro Railway & Power Co. to build an electric railway, Mr. Gentry being president.

Grafton, W. Va.—The Baltimore & Ohio Railroad Co. will, it is reported, double-track its line from Grafton to Parkersburg, W. Va., 104 miles. D. D. Carothers is chief engineer at Baltimore.

Hagerstown, Md.—Michael Elmore has been given a contract to build additional yard tracks, each one mile long, in the Western Maryland railroad yards west of Hagerstown.

Hartwell, Ga.—The Hartwell & Washington Railway Co., lately chartered, has elected directors as follows: W. O. Jones, W. D. Tutt and W. F. Anderson of Elberton, Ga.; James H. Skelton, J. D. Matheson and D. C. Alford of Hartwell, Ga.; W. J. Adams and J. M. Moss of Wilkes county; M. A. Pharr of Washington, Ga., and V. E. Hudgins of Norcross, Ga.

Houston, Texas.—The Houston Belt & Terminal Railroad Co. has let a contract to Johnson & Reed to build the first section of its line, eight miles long. The entire road will be about 30 miles long.

Imboden, Ark.—An officer of the Imboden Power & Development Co. informs the Manufacturers' Record that everything relative to the proposed electric line is as yet in a formative state. Survey has not yet been made.

Jackson, Miss.—Concerning the report that the Illinois Central Railroad would soon let a contract to build from Jackson up the Pearl River valley to Birmingham, Ala., an officer of the company writes from Chicago to the Manufacturers' Record that he knows nothing of any such line.

Jackson, Tenn.—The Jackson Railway & Light Co., capital \$600,000, has been incorporated to build an electric railway in Jackson and also in Madison county. About 37 different routes are described. The incorporators are S. S. Bush and Attila Cox of Louisville, Ky.; Alan McDonald, John Wisdom and Charles D. Lehmkuhl of Jackson, Tenn.

Joplin, Mo.—A franchise has been granted to H. W. Mitchell of New York and W. S. Brauner of St. Louis to enter Joplin with an interurban electric railway, which will be about 100 miles long and running through Jasper, Newton and McDonald counties.

Joplin, Mo.—The city council has granted a franchise for an electric railway to D. K. Wenrich of Joplin, who is said to be backed by Kansas City capitalists.

Knoxville, Tenn.—The Southern Railway is reported to be getting rights of way for a cut-off two miles long to connect the Middleboro branch with the main line east. Henry Fondi is general agent at Knoxville.

Lexington, Ky.—George Horine, J. C. Nesbit and J. P. Mullin have, it is reported, finished survey for the proposed electric railway from Lexington along the Russell Cave turnpike to Cynthiana, Ky., about 26½ miles. The line will also connect Centerville, Jackson and Broadwell; estimated cost, \$18,000 per mile. Eastern capitalists are said to be interested.

Livingston, Tenn.—President H. E. Overstreet of the Overton County Railroad Co. writes from Chicago to the Manufacturers' Record that surveys are being made for an 80-mile extension, but construction will not begin this year.

Lufkin, Texas.—The Shreveport, Houston & Gulf Railroad Co. has filed its charter to build a line from Prestridge, on the St. Louis Southwestern Railway, in Angelina county,

southward via Manning to Houston, about 100 miles. This is the line in which the Carter-Kelley Lumber Co. is interested. The directors are G. A. Kelley, R. D. Collins of Lufkin, J. J. Carroll, Jack Thomas, E. A. Carter of Camden, Texas; W. T. Carter and C. L. Carter of Houston.

Marianna, Ark.—Mr. W. P. Wells, secretary of the Marianna, Brinkley & Western Railroad Co., writes the Manufacturers' Record confirming the report that the company has been incorporated to build from Marianna to Brinkley, Ark., about 30 miles. Engineer has not yet been appointed. The officers are: Julius Lesser, president; W. P. Weld, secretary and treasurer, and the directors are Julius Lesser, Morris Lesser, James B. Groves, J. R. Jarratt, S. D. Johnston and W. S. McClintock.

Mena, Ark.—The Midland Valley Railroad Co. is reported to have in contemplation the building of an extension from Hoyer, Ark., via Mena to Texarkana, about 125 miles. J. F. Holden is vice-president at Fort Smith, Ark.

Mexia, Texas.—M. Sweeney, vice-president and general manager of the Trinity & Brazos Valley Railway, is reported as saying that track is being laid about 40 miles south of Mexia, also about 12 miles north of Peatue and 30 miles both north and south of Boblin, Texas.

Montgomery, Ala.—The Montgomery Commercial Club is reported to be interested in a plan to build an electric railway from Montgomery to Enterprise and Geneva, Ala., about 100 miles. Charles F. Moritz of Montgomery and E. F. Ellsberry of Geneva are reported to be concerned.

Montgomery, Ala.—The Louisville & Nashville Railroad Co. is reported to be surveying for an extension of the North Montgomery yards. W. A. Courtenay is chief engineer at Louisville, Ky.

New Orleans, La.—The Belt Railroad Commission has requested bids for building its proposed single track from Audubon Park to Louisa street, about seven miles.

New Orleans, La.—Mr. W. Osgood Orton, 1019 Hibernia Bank & Trust Building, informs the Manufacturers' Record that the engineering work is just being finished for the New Orleans-Baton Rouge Railroad Co., but that specifications are not complete. The company is, however, financed and the building of the line absolutely assured.

Orangeburg, S. C.—A commission has been granted for the South Carolina Public Service Corporation, which proposes to build an electric railway from Orangeburg to the saw-mill town of Ferguson, on the Santee river, 65 miles, and also to operate steamboats. The incorporators are Jos. T. Timmes, J. C. LaVine, Jos. A. Bill, Geo. Fleck, Jr., and John P. Bonney of Brooklyn, N. Y., and J. A. Graig, R. H. Jennings and Sol Kohn of Orangeburg, S. C.

Osceola, Ark.—The Osceola, Little River & Western Railroad Co. has been chartered to build a line from Osceola to Little River, about 14 miles.

Pensacola, Fla.—The Pensacola Shore Line & Power Co. has applied for a charter to build an electric railway 50 miles long from Pensacola to the Alabama boundary. The incorporators are A. Ellsberg, D. A. Frank, E. E. Melvin and R. Richard.

Richmond, Va.—An officer of the Seaboard Air Line writes the Manufacturers' Record that plans for the proposed freight-yard extension in Richmond have not yet been completed.

Rusk, Texas.—Reported that the State Railroad is to be extended. It may be sold and extended in one direction to Palestine and in the other to connect with the Texas & New Orleans Railway, or else the State may extend it. Address J. L. Ellison of the State penitentiary board, Austin, Texas.

San Antonio, Texas.—The Alma Railroad Constructing & Irrigating Co. is reported organized with \$350,000 capital to build railroads in Texas and New Mexico. J. D. Russell of Eagle Lake is president and general manager; Frank Ellsworth of New York is vice-president, and L. Jamison of Alamogordo, N. M., is secretary. The company's headquarters are at Alamogordo.

Seymour, Texas.—The Fidelity Construction Co. of Fort Worth, Texas, has, it is reported, filed a charter, capital \$600,000, and proposes to build a line from Seymour to Stamford, Texas, about 50 miles. Morgan Jones, president and manager of the Wichita Valley Railway at Seymour, is said to be interested.

Silgo, Mo.—C. L. Rogers, vice-president and general manager of the Silgo Furnace Co., is reported as saying that it has let a contract to B. D. Reilly of Springfield, Mo., to build 10 miles of railroad from Dillard to Bibby, Mo. He says that a press report that

the Sligo & Eastern Railroad would build such an extension was an error.

Spartanburg, S. C.—The Southern Railway, it is reported, will make a large addition to its side-tracks at Spartanburg Junction. W. H. Wells is engineer of construction at Washington, D. C.

St. Louis, Mo.—The Missouri, Kansas & Texas Railway has filed a mortgage for \$20,000,000, a large part of which will be used for improvements. S. B. Fisher is chief engineer at St. Louis.

St. Petersburg, Fla.—Reported that the St. Petersburg & Gulf Railway Co. will build an extension of one and one-half miles around the property of the Bayborough Improvement Co. C. L. Howard, H. A. Murphy, R. H. Thomas, T. K. Wilson and C. A. Harvey are interested.

Summerville, S. C.—Reported that the Charleston & Summerville Electric Railway Co. will begin construction immediately on its proposed line 22 miles long. Ogden Edwards is president, and George Tupper, secretary and treasurer.

Valdosta, Ga.—The full list of incorporators of the Valdosta, Moultrie & Northwestern Railway Co., which proposes to build a line from Valdosta to Moultrie, Ga., 38 miles, is as follows: C. R. Ashley, E. P. Rose, R. F. Ouseley, J. Y. Blitch, H. C. Briggs, J. A. Dasher, D. C. Ashley, M. A. Briggs, B. H. Jones and L. W. Shaw, all of Valdosta.

Victoria, Texas.—Construction is reported begun at Victoria on the proposed Texas Railway, which is to run from Port O'Connor to Victoria, San Antonio and other points.

Versailles, Ky.—Mr. R. N. Hudson, general manager of the Louisville & Atlantic Railroad, writes the Manufacturers' Record with reference to the report that it would build an extension from Beattyville as far as Floyd county, "We have no such extension projected at this time."

Versailles, Mo.—The Versailles & Sedalia Railroad Co. has been incorporated with \$60,000 capital to build a line about six miles long connecting the two points named. The directors are J. Applewhite, W. W. Tauss, J. M. Goodbar, J. C. Ottinger, J. D. Hubbard, J. A. Petty and L. B. Able.

Washington, D. C.—The bill to amend the charter of the Washington & Western Maryland Railroad, a subordinate corporation of the Baltimore & Ohio system, which proposes to build a line about two miles long to Georgetown, D. C., has been passed by Congress. D. D. Carothers is chief engineer of the Baltimore & Ohio at Baltimore, Md.

Winnfield, La.—Mr. J. D. Pace, president of the Winnfield Oil Well Railway Co., writes the Manufacturers' Record that the line will run only from Winnfield to the oil well, about three miles, and construction will begin within 10 days.

Winston-Salem, N. C.—O. H. P. Cornell, chief engineer for the proposed Winston-Salem Southbound Railway, is reported to have revised the survey from Winston-Salem to Wadesboro. The line will go via Albemarle near Norwood, through Cedar Hill and near Ansonville to Wadesboro, altogether about 90 miles.

Yazoo City, Miss.—The Yazoo & Mississippi Valley Railroad (Illinois Central system) is reported to have completed and put in operation track on its branch from Silver City to Holly Bluff, on the Sunflower river. The line is ultimately to be extended to Vicksburg.

Street Railways.

Ardmore, I. T.—The Ardmore Electric & Power Co. has been granted a franchise for a street railway.

Corpus Christi, Texas.—Application for an electric street-railway franchise has been made to the city council, and construction is to begin in about two months on the proposed line from Corpus Christi to the Alta Vista Hotel, survey to begin immediately.

Key West, Fla.—Reported that Stone & Webster of Boston have purchased the Key West Electric Co., controlling the electric railway, and will improve the property. Messrs. Stone & Webster write to the Manufacturers' Record confirming the above.

Louisville, Ky.—The Louisville Railway Co. proposes to build a line along the Bardstown pike from Doups' Point to Stringtown or the Fern Creek fair grounds, about six miles. The crostown line is also to be continued along Oak street. T. J. Minary is president.

Lynchburg, Va.—The Lynchburg Traction Co. has been granted a franchise by Campbell county to extend to the fair ground over the Salem turnpike.

San Antonio, Texas.—H. M. Littell, general manager of the San Antonio Traction Co., has recommended improvements, and H. C. Able, engineer, is examining the property.

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Agricultural-Implement Machinery.—Cotton Chopper Co., Atlanta, Ga., wants machinery for manufacturing agricultural implements, especially drills, punches, shears and machinery for making discs.

Air Compressor.—See "Power Plant."

Aluminum and Copper Folds.—Commercial Intelligence Bureau, 49 Eastcheap, London, E. C., England, wants addresses of manufacturers of aluminum and copper folds.

Bank Fixtures.—Vernon State Bank, Leesville, La., wants prices on bank fixtures.

Belting.—Germania Mills, Inc., John A. Taylor, manager, Richmond, Va., wants second-hand 8-inch and 10-inch leather or cotton belt for elevators; also good 6-inch single and double leather belt.

Bicycle Balls.—Columbus School Desk Co., P. O. Box 85, Columbus, Ga., wants addresses of manufacturers of steel bicycle balls.

Boiler.—W. C. Pirkle, Alvarado, Texas, wants 70-horse-power boiler. (See "Engine and Boiler.")

Boiler.—Thomas R. Debuam, Point Caswell, N. C., wants a second-hand 35-horse-power portable boiler. (See "Engine and Boiler.")

Boilers.—See "Engines and Boilers."

Bottling Works.—Dallas Vinegar & Produce Co., 318 North Texas Building, Dallas, Texas, wants quotations on equipment for making soda water.

Building Materials.—J. A. Daly, Nevada, Mo., wants fireproofing, structural steel, etc.

Building Materials.—T. L. Eberhardt, Chester, S. C., wants building materials for a two-story cement-block building 70x105 feet.

Building Materials.—V. M. Dorsett, manager the Hardware Store, Siler City, N. C., wants roofing, iron and glass fronts for building, plate glass, cast-iron columns and building materials generally.

Building Materials.—H. E. Adams, Coal City, Ala., wants prices on cement, brick, sheet iron and other fireproof building materials.

Building Supplies.—C. G. Mitchell, Johnson City, Tenn., wants catalogues of building supplies of interest to architects.

Cannery Equipment.—Dallas Vinegar & Produce Co., 318 North Texas Building, Dallas, Texas, wants equipment for canning fruits and vegetables. (See "Pickling Plant.")

Cement.—Glover Machine Works, Marietta, Ga., wants prices on one ton of asbestos cement, delivered at Marietta.

Cement Plant.—Fred A. Wright, 3 Court Place, Hagerstown, Md., wants catalogues and prices on machinery for the manufacture of cement.

Charcoal.—Reading Wood Pulley Co., Reading, Pa., wants a carload of hardwood charcoal; also wants to correspond with manufacturers relative to furnishing three or four carloads a year.

Crate Machinery.—R. L. Baird, Grovania, Ga., wants addresses of manufacturers of machinery for making peach crates.

Crates.—R. L. Baird, Grovania, Ga., wants addresses of firms who can furnish the basket part of a peach crate cut out and baled up.

Crushing and Pulverizing Machinery.—Fred A. Wright, 3 Court Place, Hagerstown, Md., wants catalogues and prices on machinery for crushing and pulverizing stone; daily capacity 1500 tons.

Dry-kiln.—Bankers' Lumber & Timber Co., Suite 423 First National Bank Building, Shreveport, La., wants dry-kiln.

Electrical Equipment.—Marjenhoff Company, 149 Church street, Charleston, S. C., wants electric motors.

Electrical Equipment.—See "Power Plant."

Electrical Equipment.—Strickland Bros. Machine Co., Tuscaloosa, Ala., will probably want to purchase electrical equipment.

Electric-light Plant.—City of Cartersville,

Ga., Paul Gilreath, mayor, will soon invite proposals for construction of electric-light plant; \$25,000 bond issue voted.

Elevators.—Dickson Car Wheel Co., Houston, Texas, wants bids on two three-ton elevators of modern and economic type; prices f. o. b. Houston. (See "Foundry Plant.")

Engine.—Norris Bros., Holly Springs, N. C., R. F. D. No. 2, wants traction engine to carry 10,000 feet lumber at load, equipped with tires suitable for sandy roads. (See "Lumbering Equipment.")

Engine and Boiler.—W. C. Pirkle, Alvarado, Texas, wants 60-horse-power engine and 70-horse-power boiler.

Engine and Boiler.—Thomas R. Debuam, Point Caswell, N. C., wants a new or second-hand 25-horse-power portable engine and 35-horse-power portable boiler.

Engines.—A. A. Springs, Georgetown, S. C., wants one pair marine engines, second-hand, 14x48 inches, for stern paddle-wheel steamboat.

Engine.—See "Hoisting Engine."

Engines and Boilers.—Dickson Car Wheel Co., Houston, Texas, wants bids on one 300-horse-power Corliss engine and four water-tube boilers of 100 horse-power each; prices to be made f. o. b. Houston. (See "Power Plant.")

Feed-water Heaters.—G. N. Henson, 830 Broad street, Chattanooga, Tenn., wants two second-hand open feed-water heaters, each having a capacity to take care of about 100-horse-power boilers.

Felt Washers.—Kanawha Mine Car Co., Charleston, W. Va., wants addresses of manufacturers of half-felt washers.

Fire-department Equipment.—Town of Marion, N. C., E. H. Dysart, clerk, wants a hook and ladder truck.

Flooring.—Camp Phosphate Co., C. Camp, secretary-treasurer, Ocala, Fla., wants a hardwood floor for surface 25x42 feet.

Flour-mill Machinery.—Germania Mills, Inc., John A. Taylor, general manager, Richmond, Va., wants one second-hand bolting reel (small), one horizontal bran duster for 100-barrel mill, one receivings separator.

Foundry Plant.—Dickson Car Wheel Co., Houston, Texas, wants bids on complete equipment for car-wheel foundry of 400 wheels daily capacity; to include either a 96-inch or 102-inch cupola to receive blasts from a positive blower electrically direct connected; hot iron and hot wheels to be handled on an electrical surface tram; floor hoists to be hydro-pneumatic, to have two-way power giving hoisting and lateral motions; floors to be straight line; six annealing pits to have capacity of 20 wheels each and be in straight line with hoisting apparatus to be either electrical or pneumatic; two three-ton elevators of modern and economic type; one wheel breaker with 2200-pound weight having 16-foot drop; one 10-ton reservoir ladle geared to be run by electricity, necessary tracks, 30-inch gauge, turntables, etc.; prices to be f. o. b. Houston, Texas, and where practicable to be erected and turned over. (See "Power Plant.")

Foundry Work.—Columbus School Desk Co., P. O. Box 85, Columbus, Ga., wants literature on foundry work.

Gas Plant.—See "Pipe Construction."

Glass-bottle Manufacturers.—Virginia Can Co., O. C. Huffman, president, Buchanan, Va., wants addresses of manufacturers of bottles and glasses for preserving fruits and jellies.

Glass Ink Wells.—Columbus School Desk Co., P. O. Box 85, Columbus, Ga., wants addresses of manufacturers of ink wells for school desks.

Grinding Machinery.—Wilmington Iron Works, 10 South 2d street, Wilmington, N. C., wants addresses of manufacturers of machines for grinding the faces of sadirons.

Hardware.—Commercial Intelligence Bureau, 49 Eastcheap, London, E. C., England, wants to correspond with American manufacturers of general hardware desirous of being represented by an agent traveling through India, Ceylon, Burma, China, Straits, Siam, Java and Japan.

Heating Apparatus.—Board of Education, M. H. McSpaddin, secretary, Salem, Mo., will receive bids until July 15 for the installation of a steam-heating plant in school building; plans and specifications on file in office of L. M. Rumsey Manufacturing Co., St. Louis, Mo.

Heating Apparatus.—F. C. Highsmith, mayor, Mineral Wells, Texas, wants hot-air furnace and attachments for school building of eight rooms.

Heating Apparatus.—J. G. Baird, Charlotte, N. C., wants information as to the cost of installing a system of hot-water heating for a double house of 18 rooms.

Heating Apparatus.—See Building Note under Houston, Texas.

Hoisting Engine.—Geo. S. Woodruff, Crozer Building, Philadelphia, Pa., wants for immediate delivery second-hand Lidgerwood 10x12-inch D. C. D. D. hoisting engine complete with engine and boiler.

Ice Machinery.—Cosmopolitan Ice Co., 762 Baronne street, New Orleans, La., wants machinery for ice plant of 100 tons daily capacity.

Jute.—Ed M. Jones, 611 North Church street, Charlotte, N. C., wants addresses of importers of jute used in the manufacture of lagging.

Lighters.—A. A. Springs, Georgetown, S. C., wants to contract for six iron lighters, knocked down.

Linekilns.—Fred A. Wright, 3 Court Place, Hagerstown, Md., wants catalogues and prices on linekilns.

Lumbering Equipment.—Norris Bros., R. F. D. No. 2, Holly Springs, N. C., want traction engine to carry 10,000 feet lumber at load, equipped with wide tires suitable for sandy road; also wagons to use with same. (See "Engine.")

Machine Tools.—Baltimore & Ohio Railroad Co. has prepared its machine tool list to be purchased during 1906. It includes a large number of machines, some of them of the heaviest type, required for renewal at various shops and for new shops at Philadelphia. The tools will include one 36-inch vertical drill press, one 42-inch car-wheel boring machine, four 16-inch improved engine lathes, one 30x39 and one 48x48-inch planer, one 6000-pound double-frame steam forge hammer, one 36-inch-throat combination punch and shear, two 48-inch vertical drill presses, one 60-inch radial drill press, etc. For further details address Edgaf H. Bankard, purchasing agent, Maryland Trust Building, Baltimore, Md.

Machine Tools.—J. B. Stevens, temporary address Americus, Ga., wants new iron-turning lathe and planer, to be used at Hazlehurst, Ga.

Machine Tools.—See "Agricultural-implement Machinery."

Machinery.—Russell-Compton Company, Spartanburg, S. C., wants to correspond with manufacturers relative to securing the agency for engines, boilers, iron and wood-working machinery, agricultural implements and general line of mill supplies.

Marine Engines.—See "Engines."

Metal Frames.—Ford Roofing Co., Greensboro, N. C., wants addresses of manufacturers of fireproof windows (approved by the Southwestern Tariff Association).

Mining Machinery.—Fred A. Wright, 3 Court Place, Hagerstown, Md., wants catalogues and prices on equipment for mining cement, lime, etc.

Miscellaneous Supplies.—Bids will be received until July 10 at office of D. W. Roas, general purchasing officer, Isthmian Canal Commission, Washington, D. C., for furnishing coke, pig-iron, bar steel, leather belting, skylights, tieplates, machine and pipe tools, vises, pulleys, fine-cutting machines, gauges, carpenters' tools, saws, gardeners' tools, door hardware, staples, nails, nuts, iron washers, wire, wire netting, wheelbarrows, gluepots, watering pots, oil cans, measures, screw tops, funnels, hydrant keys, water hose, rubber packing tape, burlap, cord, platform scales, cement, candles, alum, gasoline, paints, steam whistles, brooms, guide cards, loose-leaf books, filing cabinets, household furniture, grass mats, porch swing, range, etc. Blanks and full information (Circular No. 314) may be obtained from office of purchasing officer or offices of assistant purchasing agents, 24 State street, New York; customhouse, New Orleans, La.; from chief quartermaster, Department of the Lakes, Chicago; depot quartermaster, St. Louis; depot quartermaster, Jeffersonville, Ind.; chief quartermaster, Department of Gulf, Atlanta, Ga., and Commercial Club, Mobile, Ala.

Naval Supplies.—Bids will be received until July 10 at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., for furnishing at navy-yard a quantity of naval supplies as follows: Schedule 3—Steel rivets, motor generator set, brass wire, pine, poplar, steel plates, angles and beams. Schedule 5—Corn brooms, linseed oil. Applications for proposals should designate the schedules desired by number. Blank proposals furnished on application. H. T. B. Harris, paymaster-general, U. S. N.

Oils.—B. A. Bjelke, 50, Rue Vacon, Marseilles, France, wants to secure agency for cottonseed oils, mineral oils, fish oils, greases and tallow.

Paving.—See "Sewerage and Paving."

Paving.—Board of Awards, City Hall, Baltimore, Md., will receive bids until July 5 at office of Harry F. Hooper, city register, City

Hall, to curb and pave with vitrified brick Lexington street from Charles to Liberty streets. Specifications may be obtained from B. T. Fendall, city engineer, City Hall.

Paving Stones.—Kell Bros., Welch, W. Va., want prices on flagstones, caps, sills and sawed stone of various sizes for work now on hand.

Paving Work.—Bids will be received until July 6 at office of Board of Public Improvements, Room 300, New City Hall, St. Louis, Mo., for furnishing all materials, tools and labor necessary in construction of about 5000 linear feet of granitoid gutter in Hyde Park; letting No. 8299. Certified check for \$150 on some bank or trust company in St. Louis must accompany each bid. Proposal must be made on blank forms furnished by Andrew J. O'Reilly, president Board of Public Improvements. Specifications and forms of contract may be seen at president's office. Usual rights reserved.

Pickling Plant.—Dallas Vinegar & Produce Co., 318 North Texas Building, Dallas, Texas, wants prices on equipment for pickling plant. (See "Cannery Equipment.")

Pipe and Fittings, etc.—Bids will be received until June 29 at office of D. W. Ross, general purchasing officer, Isthmian Canal Commission, Washington, D. C., for furnishing iron pipe and fittings, valves, stocks and dies, shears, gasoline blast furnaces, track wrenches, portable scales etc. Blanks and full information (Circular No. 313) may be obtained from office of general purchasing officer, Washington, D. C., or the offices of the assistant purchasing agents, 24 State street, New York city; custom-house, New Orleans, La.; also from chief quartermaster, Department of the Lakes, Chicago; depot quartermaster, St. Louis; depot quartermaster, Jeffersonville, Ind.; chief quartermaster, Department of the Gulf, Atlanta, Ga., and the Commercial Club, Mobile, Ala.

Pipe Construction.—City of Cartersville, Ga., Paul Gilreath, mayor, will soon invite proposals for gas and water extensions; bond issue of \$15,000 voted.

Piping.—See "Sewerage System."

Plumbing.—See Building Note under Houston, Texas.

Plumbing Supplies.—Commercial Intelligence Bureau, 49 Eastcheap, London, E. C., England, wants addresses of manufacturers of steel pedestal closet seats.

Power Plant.—Dickson Car Wheel Co., Houston, Texas, wants bids on power plant, to consist of one steam-driven air compressor, same to deliver 1000 cubic feet of free air per minute with 120 pounds pressure at tank, or two machines having same capacity; two air receivers having an approximate capacity of 600 cubic feet each, one 220-horse-power generator, alternating current and 110 volts; one 200-horse-power Corliss engine, four water-tube boilers of 100 horse-power each, two feed-water pumps, each with capacity of 400 horse-power, and necessary motors for machinery enumerated; in all cases where possible machinery to be direct connected; prices to be f. o. b. Houston, Texas, and where practicable to be erected and turned over. (See "Foundry Plant.")

Pumps.—Western Machinery & Stores Co., Hornby Road, Sittam Building, Bombay, India, wants pumping plants for irrigation purposes, single and double-acting triplex plunger pumps with suitable engines and boilers; also lift and force pumps for deep wells.

Pumps.—See "Power Plant."

Quarrying Equipment.—Fred A. Wright, 3 Court Place, Hagerstown, Md., wants catalogues and prices on equipment for quarrying stone and marble.

Railroad Construction.—Subcontractors wanted on B. & W. Railway. The first 11 miles northeast of Houston, Texas, is ready to let; good work; pay both ways. Address Kenefick-Hammond-Quigley Construction Co., Beaumont, Texas.

Railway Car Tanks.—See "Tanks."

Railway Equipment.—Wilder Bros., Ebb, Fla., want two miles of 25 or 30-pound steel relaying rails.

Railway Equipment.—Blount Lumber Co., Nacogdoches, Texas, want either a Shay engine or light locomotive to haul log trains.

Railway Equipment.—Dickson Car Wheel Co., Houston, Texas, wants bids on necessary tracks, 30-inch gauge; turntables, etc., for foundry plant; prices f. o. b. Houston. (See "Foundry Plant.")

Railway Equipment.—H. A. Page, Aberdeen, N. C., wants prices, delivered, on four miles of 30-pound relaying steel rails and joints; also on 12 to 15 miles of 50-pound relaying steel rails with joints; all to be in good condition.

Railway Equipment.—Northwestern Car &

Locomotive Co., 543 Monadnock Building, Chicago, Ill., wants 50 60,000-pound capacity box cars, 100 50,000-pound capacity flat cars or gondola cars, 75 60,000-pound capacity flat cars or gondola cars, 6 switch engines, 4 Porter saddle-tank engines; all standard gauge.

Roofing.—Farmers' Educational and Co-operative Union of Parker County, Weatherford, Texas, wants prices on corrugated-iron roofing.

Roofing.—W. B. Camp, 29 Main street, Jacksonville, Fla., wants prices on tile roofing.

Safes.—J. O. Highsmith, Mt. Olive, N. C., wants to correspond with iron safe manufacturers relative to acting as agent or buying as dealer on a straight cash basis in carload lots.

Saw-mill.—Thomas R. Debuam, Point Caswell, N. C., wants a 40-foot carriage saw-mill.

Seating.—See "Theater Equipment."

Sewerage.—Bids marked "Proposals for Constructing Sewers," and addressed to R. L. Jordan, clerk, Radford, Va., will be received until July 25 for furnishing materials and construction of sewers in section No. 1; plans and specifications on file in office of T. L. Pickle, chairman of committee on sewers. Certified check for \$250 must accompany each bid. Bids will be based on the following approximate quantities and must be made on forms furnished by the city, and the prices will cover everything necessary to complete each item named, including excavation and back-filling of trenches, manholes, flush tanks, inlets, catchbasins, etc., furnishing and laying of pipe, Ys, traps, construction of masonry, excavating for and laying gutters, etc.; approximate quantities, 900 linear feet of 42-inch diameter brick sewer, 350 linear feet of 36-inch diameter T. C. sewer, 400 linear feet 24-inch diameter T. C. sewer, 1400 linear feet 15-inch diameter T. C. sewer, 300 linear feet of 12-inch diameter T. C. sewer, 625 linear feet 10-inch diameter T. C. sewer, 500 linear feet 6-inch diameter T. C. sewer, 20 36x6-inch Ys, 4 24x6-inch Ys, 50 15x6-inch Ys, 47 10x6-inch Ys, 150 linear feet 30-inch T. C. drain No. 2 pipe, 80 linear feet 24-inch T. C. drain No. 2 pipe, 2 30x24-inch Ys, 666 square yards cobble gutters, 500 linear feet open ditch, 2 1/2x6 feet. Usual rights reserved.

Sewerage and Paving.—Board of Improvements for Sewer District No. 2 and Paving District No. 5, Fort Smith, Ark., will let contract July 18 for furnishing labor and materials and constructing storm and sanitary sewers in said Sewer District No. 2; work to consist of approximately 36,300 linear feet of concrete or brick sewer of various sizes and 180,000 linear feet of vitrified pipe sewer 36 to 6 inches, all necessary manholes, flush tanks, lampholes and catchbasins, and of 650,000 square yards of brick pavement for Paving District No. 5. Separate proposals must be submitted for the sewer and paving work. Certified check for \$5000 must accompany each bid. Work to be done in accordance with plans and profiles, and specifications therefor, which will be on file at the office of board after July 1. Shale and cheap fuel are available, and time will be allowed for the erection of plant to manufacture the brick and sewer pipe. Usual rights reserved. Harry E. Kelley, chairman Board of Improvement.

Sewerage System.—Board of Sewer Commissioners, Max D. Miller, chairman, Marianna, Ark., will open bids July 14 for furnishing all labor and materials for constructing a sanitary sewer system for Sewerage Improvement District No. 1. Plans and specifications on file in the office of Hiram Phillips, consulting engineer, 615 Frisco Building, St. Louis, Mo.; also at office of E. W. King, secretary Board of Sewer Commissioners, from whom specifications can be obtained. The work will approximate 38,934 feet of piping of various sizes and cuts with appurtenances of house connections; 65 manholes, 30 flush tanks, 7 lampholes and 2 out-fall bulkheads; no rock or quicksand to be encountered. Certified check for 5 per cent. of amount of bid must accompany each proposal. All bids to be addressed to the secretary and endorsed "Proposals for Sewer Construction." Usual rights reserved.

Sewerage System.—R. S. Williams, city treasurer, Montgomery, Ala., will open bids July 5 for laying four sections of sanitary sewers in Highland Park and Belling Heights districts, also on Water street, requiring 10,400 feet of pipe, 8 to 24 inches, with necessary Ys, manholes, etc. Plans and specifications on file in the city engineer's office. Work to be bid on as a whole and in sections. Usual rights reserved.

Shingle Mill.—J. C. Hughes, R. F. D. No. 1, Harlem, Ga., wants shingle-mill outfit.

Stamped Tinplates.—Board of Awards, Baltimore, Md., will receive bids until July 11 at office of Harry F. Hooper, city register, City Hall, for furnishing 52,300 stamped tin

license plates. Samples and specifications may be obtained from office of J. Spencer Clarke, collector of water rents and licenses, City Hall.

Stamped Tin Plates.—See "Street Signs."

Steam Specialties.—See "Feed-water Heaters."

Store Fixtures.—W. P. Perkins & Co., Leesville, La., want prices on drug fixtures.

Street Signs.—J. B. Winslett, city secretary, Dallas, Texas, will receive bids until July 10 for furnishing the city with street signs for the names of streets in quantities of from 1000 to 10,000. Samples must accompany bids. Mark envelopes "Bids on Street Signs."

Tanks.—John A. Willis, 711 Gervais street, Columbia, S. C., wants prices and specifications on dismantled car tanks, 5000 to 8000 gallons capacity; also on new horizontal tanks 14 feet 6 inches by 10 feet 6 inches, 9000 gallons capacity, and 28 feet 6 inches by 10 feet 6 inches, 18,000 gallons capacity, all delivered Columbia, S. C.

Telephone Equipment.—G. Gilbert Telephone Co., Gilbert, W. Va., wants prices on galvanized line wire, crossarms, insulators, insulator pegs, crossarm braces, lag screws and general telephone equipment.

Theater Equipment.—J. B. Leach, Comanche, I. T., wants prices on scenery and chairs for opera-house.

Traction Engine.—See "Lumbering Equipment."

Water-purification Plants.—Bids will be received until September 5 at office of Sewerage and Water Board, 602 Carondelet street, New Orleans, La., for furnishing and erecting two complete water-purification plants—10,000,000 and 4,000,000 gallons capacity—including excavations, foundations, concrete masonry, reservoirs and filters, headhouses, pumping-station building, wharf and intake, coal storage, machinery for handling coal, piping and appurtenances complete, ready for operation; approximate areas covered by the more important structures: Pumping

station and boiler-room, 26,750 feet; head-house, 10,200 square feet; filters, 19,600 square feet; open coagulating reservoirs, 488,800 square feet; covered clear-water reservoirs, 161,469 square feet; coal and conglut storage-house, 6880 square feet; wharf, 2220 square feet; length of telpherage line, 1160 linear feet. The reservoirs are approximately from 12 to 20 feet deep, mostly of reinforced concrete construction and with concrete lining. Buildings are of concrete and brick; filters of reinforced concrete. Specifications, general plans and blank forms of proposal may be obtained at office after July 1. Plans can be seen at once at office of the board or at office of Hering & Fuller, consulting engineers, 170 Broadway, New York. Certified check for \$40,000 on a New Orleans bank, deposited in accordance with the terms of the specifications, will be required. A deposit of \$100 will be required for each set of plans and specifications given out. Usual rights reserved; F. S. Shields, secretary; George G. Earl, general superintendent.

Water-works.—See "Pipe Construction."

Water-works Equipment.—Town of Murphy, N. C., will want piping and other equipment for water-works; pipe to be laid from town to mountain stream, seven miles distant. Address J. Q. Barker, consulting engineer, Andrews, N. C.

Wireworking Machinery.—Joseph B. Babb, secretary Commercial Club, 310 North 21st street, Birmingham, Ala., wants addresses of manufacturers of machinery for making woven-wire springs.

Wooden-bucket Machinery.—R. E. Johnson, Ashboro, N. C., wants catalogues and prices on oak well-bucket machinery.

Woodworking Machinery.—C. R. Johnson, Room 503, National Bank of Commerce Building, Norfolk, Va., wants addresses of manufacturers of machinery for making cross-arms; also machinery for boring conduits.

Woodworking Machinery.—See "Crane Machinery."

Woodworking Machinery.—See "Shingle Mill."

INDUSTRIAL NEWS OF INTEREST

Southern Hardwood Timber Property

A 1600-acre tract of hardwood timber land located within three miles of railway facilities is offered for sale by E. B. Lee of Leesburg, Va. Write him for details.

Experienced Foreman Wanted.

A company about to begin the manufacture of crossarms, insulator pins, etc., at Charles Town, W. Va., wants to engage an experienced foreman. For particulars address the Jefferson Pin Co., E. B. Reed, secretary.

Factory and Power Available.

Manufacturers needing a factory and 100-horse-power equipment at Knoxville, Tenn., are invited to write the Southern Extract Co. of that city for particulars regarding its offer of facilities to that extent. Cheap fuel and timber are at hand.

To Deal in Safes.

Mr. J. O. Highsmith of Mt. Olive, N. C., wants to correspond with iron safe manufacturers relative to representing them as agent in Eastern North Carolina or purchasing as a dealer on a straight cash basis in carload lots. Correspondence is invited.

Southern Minerals and Timber.

A tract of timber lands in North Carolina containing 10,000 acres and a 5500-acre tract of manganese with water-power, timber and rights of way are offered. Both properties are being handled by B. F. Stafford, Box 110, Graham, Va., who will send details to inquirers.

To Represent Machinery Builders.

The Russel-Compton Company of Spartanburg, S. C., is prepared to correspond relative to representing machinery builders. It proposes to handle engines, boilers, iron and wood working machinery, agricultural implements, mill supplies, etc., and will conduct a general foundry and machine plant.

To Sell Franklin Boilers.

Franklin boilers will be sold in the South through I. L. Faucett, consulting engineer, offices in the Chamberlain Building, Chattanooga, Tenn. This is seen in the announcement that Mr. Faucett has arranged to represent the Franklin Boiler Works Co. of Troy, N. Y., manufacturer of the Franklin water-tube boilers.

Americans Improved Gas Heaters.

It is claimed that the American new improved gas heaters "cut your gas bills right

in two," and this is surely "a consummation devoutly to be wished." These gas heaters and fixtures represent improvements both in mechanical and scientific results, and should be investigated by people who are interested in gas-heating apparatus. They are manufactured by the American Gas Stove Co. of St. Joseph, Mo.

Condensing Outfits in Southern Mills.

More than 50 condensing outfits manufactured by the Dean Bros. Steam Pump Works have been installed in cotton mills throughout the Southern States. These outfits are independent air pumps and condensers attached to the steam engines of the mills, and have been found of valuable service to their owners. The Dean Bros. Steam Pump Works is of Indianapolis, Ind., and manufactures jet and surface condensers, vertical economic vacuum pumps, steam, power and electric pumps, duplex pumps, simple pumps, etc.

Messrs. Field & Taylor.

Announcement is made that the Taylor Brokerage Co. succeeds Messrs. Field & Taylor of Jacksonville, Fla., dealers in cottonseed products, fertilizers and other merchandise. With this change of name the company has removed to 608 Dyal-Upchurch Building, where ample facilities have been secured for a large and increasing patronage. While a specialty will be made of cottonseed products, Thomas C. Elmore of the firm will give his exclusive attention to all miscellaneous lines. Mr. Frank E. Taylor of the old firm is manager of the Taylor Brokerage Co.

Stearns Coal Co. Now Shipping.

Announcement is made that the Stearns Coal Co. of Stearns, Ky., is now shipping and solicits inquiries for estimates. This company controls 70,000 acres of bituminous coal land in Kentucky and Tennessee, present capacity of its mines being 5000 tons daily, which is to be increased as the demand warrants. The company's coal is of the best bituminous block variety and adapted to steam, gas and domestic purposes. It is mined by electricity and screened to standard trade sizes. It is the company's intention to establish a branch office in Cincinnati soon.

Weston Electrical News.

The Weston Electrical Instrument Co., Waverly Park, Newark, N. J., has taken Caxton Brown into the Newark factory as secretary of the company and sales manager. Stanley Brown succeeds Caxton Brown as manager of the New York office. The latter now has

a repair department. This new feature has been welcomed by the many users of Weston instruments in New York city, and has enabled the manufacturer to insure a higher degree of satisfaction to buyers. The company is preparing new models for measuring apparatus to meet the wider demands of modern electrical requirements.

Concrete-Block Machine Manufacturers' Association.

The second annual convention of the Concrete-Block Machine Manufacturers' Association will be held at Detroit, Mich., on August 8-9. All members are requested to be present, as it is the intention to make this the most profitable meeting this association has ever held. Each member will have an opportunity of expressing his views on behalf of the concrete block and brick industry, and from an educational standpoint it will be to the interest of every member to be present. Information regarding the convention can be obtained by addressing the secretary of the association, S. L. Wiltse of Jackson, Mich.

Gardner Governor Co. Enlarging.

Increasing demands for the engine and pump governors manufactured by the Gardner Governor Co. of Quincy, Ill., have made it necessary for facilities to be enlarged. The company is now completing extensive additions, including a 160-foot extension to the machine shop, which was already 300x120 feet. This addition is of steel construction with the saw-tooth roof, which gives an abundant light, and when equipped with machinery will increase the Gardner manufacturing facilities over 50 per cent. At Lagrange, Mo., 12 miles from Quincy, the company is erecting a 90x240-foot foundry which will double the present capacity. The Gardner Governor Co. reports a prosperous trade at present, and that indications point to a continuance of this situation.

Death of Charles C. Newton.

The machine-tool trades will regret to hear of the death of Charles C. Newton, resident and treasurer of the Newton Machine Tool Works of Philadelphia, Pa. A great part of that company's success was due to Mr. Newton's ability as a designer of machine tools and to his integrity in all his work. Mr. Newton laid the foundation of his career as an apprentice in the toolroom of the Brooks Locomotive Works. He established machine tool works at Dunkirk, N. Y., in 1875; at Cleveland, Ohio, in 1876, and at Philadelphia in 1880. In this year he established the plant which is now known as the Newton Machine Tool Works. This Philadelphia plant was Mr. Newton's sole property until 1897, when it was incorporated. It will be continued by the corporation.

Steam Pipe Covering for Mining Plants.

The H. W. Johns-Manville Company, 100 William street, New York city, has for years been meeting with remarkable success in the installation of its J-M combination felt coverings on pipes in mines and surfaces exposed to extreme weather conditions. In several instances the company has demonstrated the feasibility of carrying steam considerably over a mile, having undertaken to accomplish this result even where engineers considered it an impossibility. The manufacturer maintains a force of thoroughly-skilled mechanics for the installation of this covering in all parts of the country. The H. W. Johns-Manville Company will be glad to give full information regarding this product to anyone interested.

Texas Lignite for Fuel.

Among the various natural products being developed in Texas is lignite coal for fuel purposes. A property of this character is owned by the Consumers' Lignite Co., offices in the Wilson Building, Dallas, Texas. This company is mining about 600 tons of lignite daily, which is being so readily marketed that preparations are now being made to increase the output so that the demand can be met. It issues a leaflet which gives the preliminary report on the operations of the coal-testing plant of the United States Geological Survey at the Louisiana Purchase Exposition in connection with the results obtained from Texas lignite. The efficiencies shown should be investigated by consumers of fuel who are interested in the production of cheap power. Address D. C. Earnest, general manager, for a copy.

Engines for Driving Blower Fans.

In considering the introduction of a special engine for driving the fan of a heating apparatus in connection with the blower system of ventilation and heating, it should be clearly realized that a certain amount of steam being required for supply to the heater, the passage of that steam through the engine on

its way to the heater entails very little loss in its heating power; so little, in fact, that the actual expense of driving the fan may be disregarded, and the steam-engine cylinder may be looked upon as merely an enlargement of the steam pipe. Evidently this feature of this system has its influence on the relative cost of driving the fan by engine or by electric motor, for in the employment of the latter there is no incidental return whereby the cost of power is reduced. The B. F. Sturtevant Company of Boston can furnish further valuable facts regarding the above.

Lima Locomotive Sales.

The merits of the locomotives manufactured by the Lima Locomotive & Machine Co. of Lima, Ohio, are steadily becoming more prominent, which is evidenced by the number of sales reported to the trade each week. The following sales were consummated during the past week: Wm. Johnson & Co., Buenos Aires, S. A., two 12x16 American type; L. Smith & Son, Orange, Miss., one 10-ton Shay; New River Lumber Co., New River, Tenn., one 65-ton Shay; Hope Lumber Co., Hope, Ark., one 15-ton Shay; McMurtrie-Guller Company, San Juan, P. R., one 8x14 Forney type; Benson Logging & Lumbering Co., Oak Point, Wash., two 37-ton Shays; Lumber & Development Company of Michoacan, Conuy, Mexico, one 65-ton Shay; Caddo River Lumber Co., Prescott, Ark., one 37-ton Shay; Curry-Bitner Lumber Co., Mable, W. Va., one 33-ton Shay, and Lehigh Valley Portland Cement Co., Mitchell, Ind., one 15-ton Shay.

The Dorsey Printing Co.

The development of the Southwest has resulted in the establishment of many important enterprises supplying the demand for the manufactures and materials which such development requires. These enterprises include modern printing plants, the need for which is always one of the first recognized in a community. There is located at Dallas, Texas, a big plant of this character. It is owned by the Dorsey Printing Co., which claims to have the largest establishment of the kind in the South. The company prints, publishes, lithographs, binds, engraves, and manufactures blank books; also makes and deals in commercial stationery of every kind demanded by modern business conditions. Its representatives visit 12 States and Territories, which are largely supplied with printing and stationery from the Dorsey establishment. An interesting illustrated leaflet indicating the extent of the Dorsey enterprise has been issued recently.

South Carolina Water-Power for Sale

Capitalists and engineers who are interested in the development of Southern water-powers are advised that a valuable property of this character is offered for sale. The property is the Calhoun Falls and lands located partly in Abbeville county, South Carolina, and Elbert county Georgia, on both sides of the Savannah river. It comprises about 15,000 acres, and includes the celebrated Calhoun Falls, one of the largest undeveloped water-powers in the South. The land covers about two miles of water-front, affording good locations for mills and other industrial enterprises. In connection with this water-power some 65,000 acres of original timber lands in Oconee county, South Carolina, are offered. These properties are to be sold under decree of court to settle an estate, and will be offered in public at the courthouse in Abbeville, S. C., on October 1. Prospective purchasers can address Messrs. Smythe, Lee & Frost of Charleston, S. C., for any detailed information they may desire.

The XXth Century System.

Because of its inherent merits there has been created a large demand for the XXth Century system of heating and ventilating. The designer and manufacturer of this system has recently had occasion to resort to the courts in relation to its equipment, and is announcing an important decision of the United States Court, eastern division of Michigan, Judge Henry H. Swan of Detroit. This decision relates that certain manufacturers, who are named, have been infringing on the rights and privileges of the manufacturer of the XXth Century heating and ventilating system, and in accordance with this decision the XXth Century Heating & Ventilating Co. expects to begin suit against the infringers claiming protection under the Condit patent. It is evident that the XXth Century Company is determined to protect its interests to the fullest extent possible, and later announcements will give details of whatever action is taken. The XXth Century Heating & Ventilating Co. has its main offices and factory at Akron, Ohio, where requests for information regarding its system of heating and ventilating can be sent.

Some Orders for Voltax.

Many large contracts are being placed for Voltax, the new insulating compound manufactured by the Electric Cable Co. of 17 Battery Place, New York. The Public Service Corporation of Aurora, Ind., has ordered Voltax for waterproofing purposes; the Paul Smith Hotel Co. has ordered Voltax to be used as a waterproof paint on its telegraph and trolley poles and fenceposts in the Adirondack mountains; the Brass Goods Manufacturing Co. of Brooklyn, N. Y., has ordered Voltax for waterproofing concrete floors; the American Railways Co. of Altoona, Pa., has ordered Voltax for insulating purposes; the Taluca (Texas) Light & Power Co. has ordered Voltax for insulating purposes. Many railway companies are using Voltax in connection with underground conduit systems. It is claimed that the underground conduit systems, consisting of wooden troughs into which Voltax insulating compound is poured, may be installed and maintained at a cost ranging to 33 per cent. less than other transmission systems.

The Automatic Refrigerating Co.

One of the interesting booths at the convention of the National Electric Lighting Association, recently held at Atlantic City, was that of the Automatic Refrigerating Co., Hartford, Conn. For four days this company, represented by three able refrigerating engineers, demonstrated to the skeptical public the eminent practicability of thermostatically controlled automatic refrigerating apparatus. The exhibition plant, which had not been previously assembled in its entirety, was one of this company's standard one-horse-power motor-operated systems connected to a small insulated cooler, which was evidently designed for commercial operation, there being a noticeable absence of gold leaf and plate so commonly used in similar displays. The appearance of the whole system, in practical operation within two days of its arrival, was such as to inspire confidence, which its perfect automatic operation from the time it was started to the close of the convention demonstrated was not misplaced.

Carnegie Buys Automatic Exchange.

Mr. Andrew Carnegie has purchased from the Automatic Electric Co. of Chicago a complete private automatic telephone exchange of 20 lines for his Scottish estate. Mrs. Lucy Carnegie has the automatic exchange of 22 lines on her estate, Dungeness, on Cumberland Island. Her exchange has been in operation over two years, and Mr. Carnegie was so pleased with its working that he decided to use the same system at Skibo Castle. Mr. K. B. Weatherbee, Mr. Carnegie's mechanical engineer, was in Chicago during the latter part of May to familiarize himself with the automatic system, and expects to install the exchange at Skibo Castle in August. The initial installation will be for 13 phones, five of which will be in the castle, one in the estate office, two in the stable and garage, one in the gamekeeper's lodge, one in the gardener's lodge, one in the golfhouse, one at the dock on Dornoch Firth, where Mr. Carnegie's yacht is kept, and one at the natorium. The estate is about 10 miles square, and the automatic phones will probably be scattered all over it eventually. The automatic system will replace an old mag-meto manual system.

The Frank P. Milburn Company.

Probably the best-known architect of the South is Frank P. Milburn of Columbia, S. C. People who are acquainted with the progress of the building trades South know that Mr. Milburn has been prominent in preparing plans and specifications for important and costly structures. Railway stations at Savannah, Augusta, Charleston, Columbia and other large cities bear testimony to Mr. Milburn's skill in his chosen field of endeavor, not to speak of various other structures, such as churches, courthouses, apartment-houses, municipal buildings, hotels, residences and others which he designed. This brief reference to Mr. Milburn's work is prompted by the announcement that he has removed his offices to Washington, D. C., where he will be in closer touch with the Southern Railway, for which he has on hand some big contracts. Mr. Milburn will occupy the eighth floor of the Home Life Building and operate as the Frank P. Milburn Company. Mr. Michael Helfert, for some years Mr. Milburn's efficient assistant, goes to Washington with him, and another member of his force of draughtsmen, George F. Kepler, will be a member of the new company.

A Successful Southern Enterprise.

It is gratifying to note that a great quantity of the structural steel and ornamental iron being used throughout the South is furnished by Southern manufacturers. Among

these is that successful enterprise, the Richmond Pattern and Structural Iron Works of Richmond, Va. This company has many buildings under construction in Richmond, including contracts for the Virginia Passenger & Power Co. and with the Trussed Concrete Steel Co. of New York for work on the Richmond & Chesapeake viaduct. It has recently completed at Norfolk a \$23,000 contract, covered by the immense steel-constructed plant for the Anheuser-Busch Brewing Association, and has under construction all of the steel and iron work covered by the Southern Bell Telephone & Telegraph Co.'s building, two fire-engine houses, a large apartment-house, the Monticello & Troy Laundry and two of the largest buildings being erected for the exposition. The Richmond Company is also furnishing structural steel and ornamental iron for new theaters at Chattanooga, Tenn., and Evansville, Ind., and has large orders for material for North Carolina, South Carolina and Georgia. It is managed by C. M. Liphart, president, and J. H. Addison, secretary and treasurer. They have associated with them as chief engineer R. J. Farrar, a man of recognized ability in his profession, and as superintendent E. J. Heaton, formerly of the American Bridge Company.

Power and Mining Machinery News.

The Power & Mining Machinery Co. of Milwaukee, Wis., has appointed W. A. Lieblein as manager of the Salt Lake City branch, with offices at 215 Commercial Club Building. Mr. Lieblein is well known in the Western mining country, having managed Cripple Creek properties and represented the Rand Drill Co. Mr. W. C. MacDowell, formerly of the mining department of the company's New York office, has been appointed manager of the office at El Paso, Texas, his territory comprising Old Mexico, New Mexico and parts of Texas and Arizona. He is well known to the mining fraternity in that section for nine years previous to 1903, when he went with the Power & Mining Machinery Co., having represented the American Smelting & Refining Co. Mr. N. B. Roper, formerly chief engineer of the Cananea (Mexico) Consolidated Copper Co., has been engaged as mining engineer at the New York sales office, No. 52 William street, New York. A recent large contract secured by the Power & Mining Machinery Co. is an order for 12 sets of 36x15-inch crushing rolls and two sets of 54x20-inch crushing rolls for installation in Utah. It is said the 54x20 rolls will be the largest of their kind ever built, and that the 36x15 rolls will be the most powerful of any crushing rolls ever constructed. Catalogue No. 6 of the Power & Mining Machinery Co. comprises 176 pages, 6x9 inches, with illustrations and information for the man interested in the smelting and refining of copper and silver-lead ores.

Automatic Sprinklers Save Cotton.

Some insurance authorities doubt the ability of an automatic-sprinkler equipment to hold or extinguish a fire in a warehouse filled with cotton. They are referred to a record of a successful demonstration of such an equipment saving a warehouse and its contents of cotton. This instance is the fire in Store No. 22 of the Bush Terminal Co., Brooklyn, N. Y. This cotton warehouse contains \$175,000 worth of cotton in bales, and about noon one day two weeks ago fire within was indicated by a flow of water from the sprinklers observed coming under the doors of the building. An automatic gong in front immediately began ringing, and automatically the central station of the Bush plant, where the pumps are for this fire system, and fire headquarters were notified. When the fire companies arrived the fire was out, with very little damage, which, it is estimated, will not be more than \$1000 to contents. The roof of the building was scorched in one place. The sprinkler system acted perfectly. The fire was confined to one pile of cotton stored near the door. Cotton 15 feet away was not even touched. In all, 23 sprinkler heads, each one inch in diameter, went off over the burning pile and completely drenched it. Immediately the sprinkler heads went off the pumps in the central station were at work, and two sources of water supply, fresh and salt, were immediately in requisition for the fire. It is interesting to add that the sprinkler system in the Bush Building is that manufactured by the Manufacturers' Automatic Sprinkler Co. of 56 and 58 Liberty street, New York.

The Traylor Companies.

An important addition to manufacturing interests connected with the machinery industries is seen in the new plant, now approaching completion, of the Traylor Manufacturing & Construction Co. at Allentown, Pa. This plant has 100,000 square feet of floor space, and includes a main building 100x

490 feet, divided into a 100x285-foot foundry and a 100x205-foot machine shop, 50x100-foot pattern-storage house, 50x200-foot pattern shop and carpenter shop, 88x200-foot boiler-house, foundry flaskhouse, storage warehouse, power-house, a large erecting yard, etc. It will build all classes of mining machinery, as well as a general line of cement machinery, including an unusually powerful crushing roll to take the place of the ball mills heretofore used for reducing cement-making material and similar products fine enough to pass a 16-mesh screen; tube mills, kilns, sand-lime-brick machinery, stone and rock crushers and all kinds of pulverizing and screening machinery. This new Traylor plant will succeed that at Belleville, N. J. It will be equipped throughout with the most complete line of machinery for the efficient and economic manufacture of its chosen product. The equipment will include three large cupolas, one being large enough to melt sufficient iron for castings weighing 2½ tons; two 15-ton electric cranes, a six-ton crane, boring mills, open-side planers, large lathes, two 204-horse-power water-tube boilers, air compressor, two Corliss engines directly connected to two 100-kilowatt generators, etc. It is well to add that the Traylor Engineering Co. of 118 Liberty street, New York city, controls all the products of the Traylor Manufacturing & Construction Co., and will undertake contracts for equipment of smelting plants and other mining outfits. The two companies, however, will be operated independently. The Traylor Engineering Co. will also act as consulting metallurgical and mechanical engineer, and has undertaken to design what will be some of the largest ore-reducing plants in the United States. Its president and treasurer is Samuel W. Traylor; vice-president, Bruce W. Traylor; assistant treasurer, Frank W. Hopkins, and secretary, T. Edwin Van Saun. President Traylor recently returned from Mexico City, where he arranged with Victor M. Brascchi & Co. to take the exclusive agency for Traylor products. While in Mexico Mr. Traylor secured several important contracts. Recent Traylor contracts include two blast furnaces 46x255 feet, to utilize heat usually lost in ordinary blast-furnace practice; two furnaces for British Columbia, two for a Mexican company and one for a New Jersey copper refinery. The Traylor foundry department is working day and night, producing about 40 tons of castings daily. When the new foundry addition is completed the castings capacity will be 75 tons daily.

TRADE LITERATURE.

Stanley-G. I. Literature.

Bulletins Nos. 612 and 613 have been issued by the Stanley-G. I. Electric Manufacturing Co., of Pittsfield, Mass., to present details regarding the company's G. I. flush push-button switch and its type K arc lamps. Another recent bulletin is No. 148, relating to small sizes of induction motors.

Ice and Refrigerating Machinery.

A 18-page pamphlet describing various types of horizontal and vertical ammonia compression refrigerating machines and equipment for ice plants, breweries, packing-houses, etc., has just been issued by the De La Vergne Machine Co., foot of East 138th street, New York. The book is illustrated by many fine half-tones, a feature of these being the clever and artistic arrangement of composite views of plants installed in various parts of the world.

"A B C" System of Mechanical Draft.

A small illustrated booklet has been issued presenting briefly the advantages of the "A B C" system of mechanical draft. The convenience and economy of the equipment are pointed out, and photographic views are presented of the apparatus used. It is well known that the "A B C" system is under the control of the American Blower Co., manufacturer of heating, ventilating, drying, mechanical-draft apparatus, etc.; works and office at Detroit, Mich.

Cortright Advocate for June.

The subject of roofing for various classes of buildings is one usually given considerable attention by architects, builders and owners of structures. It is ably treated each month in the Cortright Metal Shingle Advocate, a publication devoted to telling purchasers of roofing materials the meritable features of Cortright metal shingles, slate coping and kindred materials. Ask the Cortright Metal Roofing Co. of Philadelphia and Chicago to place your name on the Advocate's mailing list.

Object-Lessons in Saw-Milling.

People who are interested in saw-milling should not fail to send for a copy of a little booklet which will be issued under the title

of "Results." This publication will be composed of 29 pages of facts, each fact telling of a result and how that result was obtained. It contains numerous object-lessons in saw-milling, presenting the experience of a score of mill men. The Corinth Engine and Boiler Works of Corinth, Miss., manufacturer of engines, boilers and saw-milling machinery, will issue the booklet.

Unions for Steam Pipes.

There has been issued a little pamphlet entitled "Unions for Steam Pipes," being an illustrated description of the several varieties of unions, with valuable suggestions concerning same by a well-known writer on such matters. This authority is W. H. Wake-man, an expert steam engineer and author of well-known books on steam engineering. The pamphlet is a reprint from Dixon's house organ, Graphite, and a copy will be sent to any engineer or steamfitter, or anyone interested in steam pipes. Address the Joseph Dixon Crucible Co., Jersey City, N. J.

"Sandercraft"—Regarding Sand-Blast Apparatus.

A pamphlet entitled "Sandercraft" is now being issued for the better information of those interested in cleaning materials by means of the sand blast. It comprises notes on connecting and operating the injector sand-blast apparatus, and will be found most useful by contractors and others who engage to do this class of work or undertake it in connection with their building contracts. Mr. C. Drucklieb of 132 Reade street, New York, publishes "Sandercraft," and is desirous of giving it a wide circulation. Ask him for a copy.

Possibilities for Vacation Tours.

Possibilities in the way of vacation tours in the New England mountains are detailed in the June number of the Boston & Maine Messenger. This little publication presents interesting facts regarding New England and its territory of mountains, lakes, rivers and seaside resorts, where thousands of people go each summer. The "challenge of the mountains" is now ringing out to those who love summer vacations in high altitudes. Write the Passenger Department, Boston & Maine Railroad, Boston, Mass., for literature telling about the section of the country through which the railway runs.

Summer Comforts—Electrical.

Progressive thinkers agree that favorable surroundings have much to do with the success of any undertaking. This applies equally to large business enterprises and small social affairs. Work and play alike are made easier and more enjoyable by agreeable environment. Electric fan motor supply in the heated summer days is real comfort to humanity. "Wood" fan motors supply so much of this comfort that they themselves are known as "Summer Comforts," and an illustrated booklet of that title is their exponent. This publication is issued by the Fort Wayne Electric Works of Fort Wayne, Ind., manufacturer of "Wood" fan motors.

Alternating and Direct-Current Motors.

It is generally known that the Westinghouse Electric & Manufacturing Co. of Pittsburg, Pa., manufactures a most complete line of alternating and direct-current motors for all classes of service. But not everyone is familiar with the capacity of the different types and just what work each type performs. In order that these facts may be known the company presents some interesting information in its special publication 7049. This gives a list of the Westinghouse motors in convenient form for reference. Besides these motors, the company manufactures special motors for special conditions, for all classes of service and of any capacity.

Colors for Cement Products.

It would seem that colored concrete is destined to take an important part in concrete construction, and considerable attention has been given to this subject of colors for cement products by the Miracle Pressed Stone Co. of Minneapolis, Minn. For months this company has been experimenting in an endeavor to place on the market a line of colors that could be fully depended upon. It is claimed that this has been accomplished, and the company is now issuing a leaflet of explanation entitled "Miracle Colors for Cement Products—The Best to Use and the Way to Use Them." The coloring materials offered are composed of ingredients which are natural colors taken from the earth, free from gypsum and other sulphates which cause efflorescence. These Miracle colors are offered by the Miracle Company with a guarantee that they will answer all the requirements of the situation.

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,
Baltimore, Md., June 27.

The Baltimore stock market was quiet to dull during the past week.

In the trading United Railways common sold at 15; the trust certificates from 16 to 15½; United scrip, 26; the incomes from 74 to 72½, reacting to 73¼; income trust certificates from 71¼ to 73; the 4s at 92¾; Consolidated Gas 4½s, 98¾ to 99; Consolidated Gas, Electric Light & Power stock, 40 to 41; do. preferred, 89½ to 90. Seaboard common was dealt in at 30; the new common at 29; the new first preferred at 89 and the new second preferred at 60; Seaboard 4s at 87¼ to 87½; do. 10-year 5s, 102; Cotton Duck 5s, 86¾ to 87½; Consolidated Cotton Duck common, 12½; do. preferred, 36; G. B. S. common, 10¼; the incomes, 37½; the 1sts, 63 to 62½.

Old Town Bank sold at 11¼; Continental Trust, 200; Fidelity & Deposit, 133¼; International Trust, 153.

Other securities were traded in thus: Baltimore & Ohio stock, 119¼; Knoxville Traction 5s, 107; West Virginia Central 6s, 109¾; Baltimore City 3½s, 1928, 103; Alabama Consolidated Coal & Iron 5s, 94 to 94½; Baltimore & Yorktown Turnpike, 1½; Norfolk Railway & Light 5s, 99¼ to 99½; Northern Central Railway stock, 100½; Amalgamated Copper, 102¾; Baltimore City 3½s, 1930, 103; Baltimore Traction 5s, 114; Atlantic Coast Line of Connecticut, 350; Baltimore Brick common, 8; Carolina Central 4s, 99; Merchants' Coal joint 5s, 97¾; Comas Cigarette Machine Co., 6; Houston Oil preferred, 48¼; Atlantic Coast Line 4s, 100; Virginia deferred, Brown Bros. certificates, 23; George's Creek Coal & Iron, 79½ to 80; Seaboard & Roanoke 5s, 111¼; Baltimore City 5s, 1916, W. L., 111; Houston Oil common, 8¼ to 8; Anacostia & Potomac 5s, 106¼; Coal & Iron Railway 5s, 106; Georgia, Carolina & Northern 5s, 112; Maryland & Pennsylvania incomes, 67¾ to 67½; Alabama Consolidated Coal & Iron preferred, 90 to 90½; Reisterstown Turnpike, 1¾; Metropolitan Railway 5s (Washington, D. C.), 114¼; Charleston Consolidated Electric 5s, 95.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended June 27, 1906.

| Railroad Stocks. | Par. | Bid. | Asked. |
|-------------------------------|------|------|--------|
| Atlantic Coast Line of Conn. | 100 | 350 | 352 |
| Georgia Sou. & Fla. 1st Pref. | 100 | 88 | 90 |
| Georgia Sou. & Fla. 2d Pref. | 100 | 82 | 85½ |
| Seaboard Company Common | 100 | 23¾ | 24 |
| Seaboard Company 2d Pref. | 100 | 58 | 59½ |
| Western Maryland | 50 | 19 | 20 |

| Bank Stocks. | Par. | Bid. | Asked. |
|--------------------------------|------|------|--------|
| Citizens' National Bank | 100 | 28½ | 29 |
| Commercial & Far. Nat. Bank | 100 | 135 | 135 |
| Com. & Far. Nat. Bk. Blue Cfs. | 100 | 140 | 160 |
| Farmers & Mer. Nat. Bank | 40 | 40 | 54 |
| Maryland National Bank | 20 | 21½ | 22 |
| Merchants' National Bank | 100 | 180 | 180 |
| National Bank of Baltimore | 100 | 119 | 120 |
| National Bank of Commerce | 15 | 25 | 25 |
| National Howard Bank | 10 | 11½ | 11½ |
| National Marine Bank | 20 | 20 | 40 |
| National Union Bank of Md. | 100 | 120 | 120 |

| Trust, Fidelity and Casualty Stocks. | Par. | Bid. | Asked. |
|--------------------------------------|------|------|--------|
| Continental Trust | 100 | 200 | 202 |
| Fidelity & Deposit | 50 | 130 | 140 |
| International Trust | 100 | 153 | 154 |
| Maryland Casualty | 25 | 53 | 53 |
| Maryland Trust | 100 | 120 | 120 |
| Maryland Trust Pref. | 100 | 125 | 125 |
| Mercantile Trust & Deposit | 50 | 145 | 145 |
| Title Guar. & Trust | 100 | 123 | 123 |
| Union Trust | 50 | 62 | 62 |

| Miscellaneous Stocks. | Par. | Bid. | Asked. |
|-------------------------------|------|------|--------|
| Ala. Con. Coal & Iron Pref. | 100 | 90 | 91 |
| Consolidated Gas El. L. & P. | 100 | 40 | 40½ |
| Consol. Gas El. L. & P. Pref. | 100 | 87 | 88 |
| Consolidated Cotton Duck Com. | 50 | 12½ | 13 |
| Consolidated Cotton Duck Pfd. | 50 | 35 | 36 |
| G. B. & S. Brewing Co. | 100 | 10 | 10½ |
| George's Creek Coal | 100 | 75 | 80 |
| Internat. Mer. Marine Pref. | 100 | 3½ | 3½ |

| Railroad Bonds. | Par. | Bid. | Asked. |
|-------------------------------------|------|------|--------|
| Atlan. Coast Line 1st Con. 4s, 1932 | 99½ | 99½ | 99½ |
| Atlantic Coast Line (Conn.) 5s | 100 | 112 | 112 |

| | | |
|--------------------------------------|------|------|
| Atlan. Coast Line (S. C.) 4s, 1948 | 102½ | 104 |
| Carolina Central 4s, 1949 | 98½ | 99½ |
| Char., Col. & Aug. 1st 5s, 1910 | 110¼ | 111½ |
| Coal & Iron Railway 5s, 1920 | 105½ | 105½ |
| Florida Southern 4s, 1940 | 96¼ | 97½ |
| Georgia & Alabama 5s, 1945 | 111¼ | 112 |
| Georgia, Car. & North. 1st 5s, 1929 | 111¼ | 112½ |
| Georgia Pacific 1st 6s, 1922 | 122½ | 123½ |
| Maryland & Pennsylvania 4s, 1951 | 94½ | 95 |
| Richmond & Danville 5s | 111 | 112½ |
| Richmond & Danville Gold 6s, 1915 | 115¼ | 115¼ |
| Seaboard Air Line 4s, 1950 | 87 | 87½ |
| Seaboard Air Line 5s, 10-year, 1911 | 101¾ | 102 |
| Seaboard & Roanoke 5s, 1926 | 110¾ | 110¾ |
| Silver Sprgs., Ocala & Gulf 4s, 1918 | 99 | 100½ |
| Virginia Midland 2d 6s, 1911 | 106 | 106 |
| Virginia Midland 3d 6s, 1916 | 115¾ | 115¾ |
| Virginia Midland 4th 3-4-5s, 1921 | 109 | 111 |
| Western Maryland new 4s, 1952 | 86¼ | 86½ |
| West Virginia Central 1st 6s, 1911 | 108½ | 108½ |

| Street Railway Bonds. | Par. | Bid. | Asked. |
|------------------------------------|------|------|--------|
| Anacostia & Potomac 5s, 1949 | 106 | 106½ | 106½ |
| Augusta Rwy. & Elec. 5s, 1940 | 104½ | 104½ | 105 |
| Baltimore City Passenger 5s, 1911 | 103 | 103 | 103 |
| Baltimore Traction 1st 5s, 1929 | 114 | 116 | 116 |
| Charleston Con. Electric 5s, 1909 | 95 | 95½ | 95½ |
| City & Suburban 5s (Balto.), 1922 | 115 | 115 | 115 |
| City & Suburban 5s (Wash.), 1948 | 105½ | 105½ | 105½ |
| Knoxville Traction 1st 5s, 1928 | 107 | 107 | 107 |
| Norfolk Railway 1st 5s, 1949 | 100¾ | 101¾ | 101¾ |
| Macon Rwy. & Lt. 1st Con. 5s, 1953 | 101 | 101½ | 101½ |
| Metropolitan 5s (Wash.), 1925 | 114½ | 114½ | 114½ |
| Norfolk Railway & Light 5s | 99¼ | 99¼ | 99¼ |
| Norfolk Street Railway 5s, 1944 | 109¼ | 109¼ | 111 |
| North Baltimore 5s, 1942 | 117 | 117 | 117 |
| United Railways 1st 4s, 1949 | 92¼ | 92¼ | 92¼ |
| United Railways Inc. 4s, 1949 | 73½ | 73½ | 73½ |

| Miscellaneous Bonds. | Par. | Bid. | Asked. |
|----------------------------------|------|------|--------|
| Alabama Consol. Coal & Iron 5s | 93 | 94 | 94 |
| Consolidated Gas 6s, 1910 | 107 | 107 | 107 |
| Consolidated Gas 5s, 1939 | 95¾ | 95¾ | 95¾ |
| Consolidated Gas 4½s, Cfs. | 98¼ | 98¼ | 99¼ |
| Consolidated Gas El. L. & P. 4½s | 85 | 90 | 90 |
| G. B. & S. Brewing 1st 3-4s | 62 | 63 | 63 |
| G. B. & S. Brewing 2d Incomes | 37 | 38 | 38 |
| Maryland Steel 5s | 104½ | 104½ | 104½ |
| Mt. V. & Woodby Cot. Duck 5s | 86 | 86½ | 86½ |
| United Elec. Light & Power 4½s | 95½ | 96 | 96 |

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending June 25.

| | Bid. | Asked. |
|------------------------------------|------|--------|
| Abbeville Cotton Mills (S. C.) | 96 | 97 |
| Aiken Mfg. Co. (S. C.) | 84 | 91 |
| Anderson Cotton Mills (S. C.) | 105 | 105 |
| Arkwright Mills (S. C.) | 125 | 125 |
| Augusta Factory (Ga.) | 80 | 85 |
| Avondale Mills (Ala.) | 105 | 110 |
| Belton Mills (S. C.) | 109 | 110 |
| Bibb Mfg. Co. (Ga.) | 122 | 122 |
| Brandon Mills (S. C.) | 113 | 113 |
| Cabarrus Cot. Mills (N. C.) | 120 | 120 |
| Chadwick Mfg. Co. (N. C.) Pfd. | 102 | 102 |
| Chiquola Mfg. Co. (S. C.) | 95 | 100 |
| Clifton Mfg. Co. (S. C.) | 124 | 127 |
| Clifton Mfg. Co. (S. C.) Pfd. | 102 | 105 |
| Clinton Cotton Mills (S. C.) | 138 | 145 |
| Columbus Mfg. Co. (Ga.) | 99 | 101 |
| Courtenay Mfg. Co. (S. C.) | 100 | 100 |
| Dallas Mfg. Co. (Ala.) | 92 | 96 |
| Darlington Mfg. Co. (S. C.) | 64 | 64 |
| Eagle & Phenix Mills (Ga.) | 125 | 126 |
| Easton Cotton Mills (S. C.) | 132 | 133 |
| Enoree Mfg. Co. (S. C.) | 100 | 87½ |
| Enoree Mfg. Co. (S. C.) Pfd. | 100 | 102 |
| Enterprise Mfg. Co. (Ga.) | 86 | 92 |
| Exposition Cotton Mills (Ga.) | 200 | 200 |
| Gaffney Mfg. Co. (S. C.) | 89 | 90 |
| Gainesville Cotton Mills (Ga.) | 29 | 40 |
| Granby Cot. Mills (S. C.) 1st Pfd. | 59 | 64 |
| Granville Mfg. Co. (S. C.) | 160 | 165 |
| Greenwood Cotton Mills (S. C.) | 98 | 98 |
| Greenville Mills (S. C.) | 115 | 115 |
| Henrietta Mills (N. C.) | 200 | 200 |
| King Mfg. Co. John P. (Ga.) | 97 | 103 |
| Lancaster Cotton Mills (S. C.) | 102 | 104 |
| Lancaster Cot. Mills (S. C.) Pfd. | 98 | 98 |
| Langley Mfg. Co. (S. C.) | 92 | 96 |
| Laurens Cotton Mills (S. C.) | 172 | 172 |
| Limestone Mills (S. C.) | 115 | 115 |
| Lockhart Mills (S. C.) | 100 | 102 |
| Lockhart Mills (S. C.) Pfd. | 97 | 100 |
| Lowndes Mills (N. C.) | 99 | 94 |
| Lowndes Mills (N. C.) Pfd. | 85 | 102 |
| Marlboro Cotton Mills (S. C.) | 73 | 81 |
| Mayo Mills (N. C.) | 165 | 185 |
| Mills Mfg. Co. (S. C.) | 106 | 110 |
| Mills Mfg. Co. (S. C.) Pfd. | 103 | 103 |
| Monaghan Mills (S. C.) | 100 | 100 |
| Monarch Cotton Mills (S. C.) | 90 | 95 |
| Newberry Cotton Mills (S. C.) | 114 | 120 |
| Norris Cotton Mills (S. C.) | 107 | 115 |
| Orell Mfg. Co. (N. C.) | 88 | 88 |
| Orelia Cot. Mills (S. C.) Pfd. | 80 | 80 |
| Orangeburg Mfg. Co. (S. C.) Pfd. | 80 | 97 |
| Orr Cotton Mills (S. C.) | 104 | 105 |
| Pacolet Mfg. Co. (S. C.) | 185 | 200 |
| Pacolet Mfg. Co. (S. C.) Pfd. | 102 | 104 |
| Pelzer Mfg. Co. (S. C.) | 170 | 175 |
| Piedmont Mfg. Co. (S. C.) | 171 | 177 |
| Poe Mfg. Co. (S. C.) | 125 | 129 |
| Richard Cot. Mills (S. C.) Pfd. | 51 | 56 |
| Raleigh Cotton Mills (N. C.) | 99 | 105 |
| Salem Mills (S. C.) | 100 | 100 |
| Sibley Mfg. Co. (Ga.) | 64 | 68 |
| Southern Cotton Mills (S. C.) | 80 | 80 |
| Spartan Mills (S. C.) | 145 | 151 |
| Springfield Mills (S. C.) | 100 | 100 |
| Trion Mfg. Co. (Ga.) | 131 | 142 |
| Tucupau Mills (S. C.) | 164 | 164 |
| Victor Mfg. Co. (S. C.) | 116 | 117 |
| Warren Mfg. Co. (S. C.) | 97 | 100 |
| Warren Mfg. Co. (S. C.) Pfd. | 105 | 107 |
| Washington Mills (Va.) | 22 | 22 |
| Washington Mills (Va.) Pfd. | 100 | 100 |
| Whitney Mfg. Co. (S. C.) | 145 | 160 |
| Wiscasset Mills (N. C.) | 122 | 135 |
| Woodruff Cotton Mills (S. C.) | 105 | 107 |

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending June 25.

| | Bid. | Asked. |
|---------------------------------|------|--------|
| Abbeville Cotton Mills (S. C.) | 96 | 98 |
| Aetna Cotton Mills (S. C.) Pfd. | 85 | 89 |
| Aiken Mfg. Co. (S. C.) | 85 | 89 |
| American Spinning Co. (S. C.) | 118 | 118 |
| Anderson Cotton Mills (S. C.) | 103 | 104 |
| Arcadia Mills (S. C.) | 80 | 93 |
| Arkwright Cotton Mills (S. C.) | 124 | 124 |
| Augusta Factory (Ga.) | 80 | 85 |
| Avondale Mills (Ala.) | 100 | 100 |
| Belton Mills (S. C.) | 108 | 110 |
| Bibb Mfg. Co. (Ga.) | 115 | 115 |
| Brandon Mills (S. C.) | 115 | 120 |
| Brogton Mills (S. C.) | 77 | 80 |
| Cabarrus Cotton Mills (N. C.) | 120 | 120 |
| Chadwick Mfg. Co. (N. C.) Pfd. | 102 | 102 |
| Chiquola Mfg. Co. (S. C.) | 95 | 100 |

| | | |
|------------------------------------|-----|-----|
| Clifton Mfg. Co. (S. C.) | 132 | 128 |
| Clifton Mfg. Co. (S. C.) Pfd. | 103 | 103 |
| Clinton Cotton Mills (S. C.) | 140 | 145 |
| Columbus Mfg. Co. (Ga.) | 94 | 97 |
| Courtenay Mfg. Co. (S. C.) | 100 | 103 |
| Dallas Mfg. Co. (S. C.) | 89 | 96 |
| Darlington Mfg. Co. (S. C.) | 114 | 115 |
| D. E. Converse Co. (S. C.) | 115 | 115 |
| Engle & Phenix Mills (Ga.) | 120 | 120 |
| Easley Cotton Mills (S. C.) | 130 | 136 |
| Easley Mfg. Co. (S. C.) | 85 | 88 |
| Enoree Mfg. Co. (S. C.) Pfd. | 100 | 103 |
| Enterprise Mfg. Co. (Ga.) | 82 | 90 |
| Exposition Cotton Mills (Ga.) | 174 | 200 |
| Gaffney Mfg. Co. (S. C.) | 93 | 97 |
| Gainesville Cotton Mills (Ga.) | 35 | 35 |
| Glenwood Mills (S. C.) Cotton | 102 | 105 |
| Gluck Mills (S. C.) | 92 | 97 |
| Granby Cot. Mills (S. C.) 1st Pfd. | 50 | 50 |
| Greenville Mfg. Co. (S. C.) | 157 | 157 |
| Greenville Cotton Mills (S. C.) | 95 | 95 |
| Grendel Mills (S. C.) | 115 | 115 |
| Hartsville Cotton Mill (S. C.) | 92 | 95 |
| Henrietta Mills (N. C.) | 200 | 200 |
| Inman Mills (S. C.) | 94 | 97 |
| King Mfg. Co. J. P. (Ga.) | 97 | 103 |
| Lancaster Cotton Mills (S. C.) | 100 | 106 |
| Lancaster Cot. Mills (S. C.) Pfd. | 95 | 95 |
| Langley Mfg. Co. (S. C.) | 92 | 96 |
| Laurens Mills (S. C.) | 172 | 172 |
| Limestone Mills (S. C.) | 104 | 104 |
| Lockhart Mills (S. C.) | 99 | 103 |
| Lockhart Mills (S. C.) Pfd. | 101 | 101 |
| Loray Cotton Mills (N. C.) Pfd. | 85 | 90 |
| Louise Mills (S. C.) | 94 | 94 |
| Louise Mills (N. C.) Pfd. | 102 | 102 |
| Marlboro Cotton Mills (S. C.) | 84 | 84 |
| Mayo Mills (N. C.) | 150 | 200 |
| Mills Mfg. Co. (S. C.) | 100 | 100 |
| Mills Mfg. Co. (S. C.) Pfd. | 99 | 101 |
| Molloy Mfg. Co. (S. C.) | 90 | 95 |
| Monaghan Mills (S. C.) | 99 | 103 |
| Monarch Cotton Mills (S. C.) | 89 | 89 |
| Newberry Cotton Mills (S. C.) | 115 | 115 |
| Ninety-Six Cotton Mills (S. C.) | 92 | 97 |
| Norris Cotton Mills (S. C.) | 106 | 106 |
| Odell Mfg. Co. (N. C.) | 90 | 90 |
| Orangeburg Mfg. Co. (S. C.) Pfd. | 103 | 106 |
| Orr Cotton Mills (S. C.) | 103 | 103 |
| Pacolet Mfg. Co. (S. C.) | 182 | 182 |
| Pacolet Mfg. Co. (S. C.) Pfd. | 102 | 104 |
| Pelzer Mfg. Co. (S. C.) | 170 | 173 |
| Piedmont Mfg. Co. (S. C.) | 170 | 175 |
| Poe Mfg. Co. F. W. (S. C.) | 125 | 130 |
| Raleigh Cotton Mills (N. C.) | 100 | 100 |
| Richland Cot. Mills (S. C.) Pfd. | 50 | 50 |
| Roxboro Mills (N. C.) | 118 | 118 |
| Saxon Mills (S. C.) | 102 | 104 |
| Sibley Mfg. Co. (Ga.) | 59 | 63 |
| Southern Cotton Mills (N. C.) | 80 | 80 |
| Spartan Mills (S. C.) | 145 | 150 |
| Springstein Mills (S. C.) | 100 | 100 |
| Trion Mfg. Co. (Ga.) | 132 | 140 |
| Tucapau Mills (S. C.) | 162 | 162 |
| Victor Mfg. Co. (S. C.) | 115 | 115 |
| Warren Mfg. Co. (S. C.) | 95 | 102 |
| Warren Mfg. Co. (S. C.) Pfd. | 207 | 207 |
| Washington Mills (Va.) | 17 | 22 |
| Washington Mills (Va.) Pfd. | 93 | 96 |
| Whitney Mfg. Co. (S. C.) | 145 | 145 |
| Wiscasset Mills (N. C.) | 119 | 125 |
| Woodruff Cotton Mills (S. C.) | 107 | 110 |

Bankers' Conventions.

At the annual convention of the West Virginia Bankers' Association, held at Elkins, W. Va., June 19 and 20, the following officers were elected: C. T. Hiteshaw, Parkersburg, president; vice-presidents for the five districts in the order named—S. H. White, Clarksburg; R. E. Talbott, Philippi; E. A. Reid, Charleston; E. A. Sayre, St. Mary's, and John McCulloch, Point Pleasant; W. G. Wilson, Elkins, secretary and treasurer; delegates to American Bankers' Association, F. M. Staunton, Charleston; J. K. Oney, Huntington; W. B. Irvine, Wheeling.

The Maryland Bankers' Association held its annual meeting at Ocean City, Md., June 19, 20 and 21. The following officers were elected: President, Alexander Neill, president the Hagerstown Bank; vice-presidents, H. B. Wilcox, cashier First National Bank, Baltimore; Harold Harding, cashier Patapsco National Bank, Ellicott City; H. L. Cooper, president Denton National Bank; Waldo Newcomer, president National Exchange Bank, Baltimore; John Sterling, cashier of the Bank of Crisfield; Samuel A. Graham, cashier of the Farmers and Merchants' Bank of Salisbury; Daniel Annan, cashier of the Second National Bank of Cumberland; Gustavus Ober of Baltimore, C. C. Shriver, president Metropolitan Savings Bank, Baltimore; W. H. Buck, Jr., cashier National Bank of Cockeysville; secretary, Charles Hann, assistant cashier Mechanics' National Bank of Baltimore; treasurer, William Marriott of the Western National Bank of Baltimore.

At the annual convention of the North Carolina Bankers' Association, held at Lake Toxaway June 19, 20 and 21, the following officers were elected: John F. Wiley of Durham, president; H. J. Jackson of Raleigh, W. T. Old of Elizabeth City and W. C. Wilkinson of Charlotte, vice-presidents; W. A. Hunt of Henderson, secretary and treasurer; Charles N.

Evans of Wilmington, E. Sluder of Asheville, J. O. Ellington of Fayetteville, George W. Maslin of Waynesville, J. F. Watlington of Reidsville, J. S. Little of Greenville and J. S. Bradshaw of Roxboro, members of the executive committee; George Stevens of Charlotte, W. G. Bradshaw of High Point, G. S. Covington of Rockingham and J. V. Grainger of Wilmington, delegates to the convention of the American Bankers' Association; alternates, H. I. Woodhouse of Concord, C. P. McNeeley of Mooresville, R. W. Grainger of North Wilkesboro and R. W. Taylor of Morehead City.

Bank Reports.

The First National Bank of Baltimore, Md., reports at close of business June 18 loans and discounts, \$3,715,003; capital stock paid in, \$1,000,000; surplus fund, \$350,000; undivided profits, less expenses and taxes paid, \$121,918; total deposits, \$6,255,561; total resources, \$8,397,006. J. D. Ferguson is president; Jos. R. Foard, vice-president; H. B. Wilcox, cashier, and Wm. S. Hammond, assistant cashier.

The First National Bank of Birmingham, Ala., reports June 18 loans and discounts, \$5,198,835; total cash, \$3,284,686; capital stock, \$1,000,000; surplus and profits, \$540,789; circulation, \$987,500; total deposits, \$7,283,560; total resources, \$9,811,849. W. P. G. Harding is president; J. H. Woodward, vice-president; J. H. Barr, vice-president and cashier; A. R. Forsyth, F. S. Foster and Thos. Bowron, assistant cashiers.

The Birmingham Trust & Savings Co. of Birmingham, Ala., reports at close of business June 18 loans and discounts, \$2,671,686; due from banks and bankers and cash in vault, \$1,007,903; capital stock, \$500,000; surplus, \$200,000; undivided profits, \$77,775; total deposits, \$3,329,270; total assets, \$4,107,903. Arthur W. Smith is president; Tom O. Smith, vice-president; W. H. Manly, cashier; Benson Cain, assistant cashier, and Chappell Cory, secretary.

The First National Bank of Greenville, Miss., reports June 18 loans and discounts, \$767,841; cash and reserve, \$181,040; capital stock, \$100,000; surplus, \$100,000; undivided profits (net), \$68,988; circulation, \$100,000; deposits (individual), \$813,212; total resources, \$1,182,201. W. H. Negus is president; J. T. Atterbury, vice-president; A. B. Nance, cashier, and T. W. McCoy, assistant cashier.

The First National Bank of Gastonia, N. C. reports at close of business June 18 loans and discounts, \$552,589; total cash, \$97,349; capital, \$100,000; surplus, \$15,000; undivided profits (net), \$14,540; circulation, \$100,000; total deposits, \$441,837; total resources, \$794,597. L. L. Jenkins is president; R. R. Ray, vice-president; S. N. Boyce, cashier; M. T. Wilson, assistant cashier, and L. C. Pegram, teller.

The Cleveland National Bank of Cleveland, Tenn., reports June 18 loans and discounts, \$545,593; cash and sight exchange, \$135,753; capital stock, \$150,000; surplus and profits (net), \$150,677; circulation, \$150,000; deposits, \$446,908; total resources, \$897,586. J. E. Johnston is president; W. P. Lang, cashier, and Frank J. Harle, assistant cashier.

The Commercial National Bank of Houston, Texas, reports at close of business June 18 loans and discounts, \$2,168,462; cash on hand and sight exchange, \$1,882,927; capital, \$300,000; surplus, \$400,000; undivided profits (net), \$124,230; circulation, \$290,100; total deposits, \$3,567,059; total assets, \$4,681,389. W. B. Chew is president; Jas. A. Baker, Jr., vice-president; H. R. Eldridge, cashier, and Geo. L. Price and W. E. Hertford, assistant cashiers.

The First National Bank of Richmond, Va., reports June 18 loans and discounts,

\$5,321,160; cash and due from banks, \$1,225,940; capital, \$600,000; surplus fund, \$400,000; undivided profits, \$265,901; circulation, \$592,000; deposits, \$4,757,064; total resources, \$7,288,340. John B. Purcell is president; John M. Miller, Jr., vice-president and cashier, and Chas. R. Burnett and J. C. Joplin, assistant cashiers.

The Frost National Bank of San Antonio, Texas, reports at close of business June 18 loans and discounts, \$1,817,648; cash, \$1,201,793; capital stock paid in, \$250,000; surplus and undivided profits, \$291,304; circulation, \$247,200; deposits, \$2,481,937; total resources, \$3,270,441. T. C. Frost is president; J. T. Woodhull, vice-president; Ned McIlhenny, cashier.

The Bank of Ensley at Ensley, Ala., reports at close of business June 18 loans and discounts, \$451,009; cash due from banks and in vault, \$114,078; capital stock, \$100,000; surplus, \$20,000; undivided profits, \$20,903; deposits, \$531,022; total assets, \$671,926. The bank is conducted by Messrs. Ramsay & McCormack, the partners being Erskine Ramsay and G. B. McCormack. R. E. Chadwick is cashier, and C. C. Johnston, assistant cashier.

The Mercantile Trust Co. of St. Louis, Mo., reports at close of business June 18 loans, \$17,177,232; cash in vaults and depositories, \$3,983,821; capital stock paid in, \$3,000,000; surplus and undivided profits, \$6,623,385; deposits, \$17,429,979; total resources, \$27,379,444. Festus J. Wade is president; Paul Brown, Lorenzo E. Anderson and Geo. W. Wilson, vice-presidents; William Maffitt, treasurer, and C. H. McMillan, secretary.

The Calcasieu National Bank of Lake Charles, La., reports at close of business June 18, loans and discounts, \$1,417,164; cash and sight exchange, \$327,284; capital stock, \$150,000; surplus, \$100,000; undivided profits (net), \$55,066; circulation, \$73,800; deposits, \$1,545,596; total resources, \$1,928,013. H. C. Drew is president; George Horridge and J. A. Bel, vice-presidents; Frank Roberts, cashier, and E. N. Hazzard, assistant cashier.

The First National Bank of Tishomingo, I. T., reports at close of business June 18, loans and discounts, \$77,131; cash and sight exchange, \$14,788; capital stock, \$25,000; surplus and undivided profits, \$10,679; circulation, \$25,000; deposits (banks and individual), \$57,097; total resources, \$127,776. A. B. Dunlap is president and Herman C. Schultz, cashier.

Witham Banks to Convene.

The annual meeting of the 75 banks operating in different towns in Georgia and Florida under the Witham Banking System will be held this year at Warm Springs, Ga., opening on July 3. The head of the system is Mr. W. S. Witham of Atlanta. Mr. Asa G. Candler, president of the Central Bank and Trust Corporation of Atlanta, will call the meeting to order, and Mr. O. E. Dooley of the Home Savings Bank, Macon, Ga., will reply to various questions which have been propounded by the bank cashiers. Papers upon several topics will be read. Mr. G. Gunby Jordan of Columbus, Ga., and Mr. A. P. Cole, cashier of the Central Bank and Trust Corporation, will make addresses.

New Corporations.

The New Elm State Bank of New Elm, Texas, is reported to have begun business.

The Ash Flat Valley Bank of Olney, I. T., has begun business, it is reported, with \$10,000 capital.

Press reports state that local citizens are considering the plan to establish a banking and trust company in San Angelo, Texas.

The First State Bank of Pampa, Texas, has been incorporated with \$10,000 capital by J. T. Crawford, J. S. Wynn, T. D. Hobart, S. B. Owens, J. C. Rider.

The National Bank of Tifton, Ga., has been approved; capital \$50,000. The organizers are J. L. Brooks, L. O. Benton, J. N. Horne, I. W. Bowen and Perry Moore.

The First National Bank of Lenoche, Ark., has been approved; capital \$25,000. The organizers are A. C. Curtis, A. J. Walls, Geo. Rule, Jr., W. B. Smith and John P. Cuning.

The First National Bank of May, Texas, capital \$25,000, has been approved. The organizers are T. C. Yantis, B. H. Bettis, Geo. W. Plummer, W. S. Gray and J. G. McBride.

The Leakesville-Spray Realty & Insurance Co. has been organized at Leakesville, N. C., with \$10,000 capital. A. D. Jail is president; C. W. De Shago, treasurer, and John Norman, secretary.

The Bank of Moss Point, Miss., has been organized with \$25,000 capital. The incorporators are J. Wyatt Griffin, H. C. Herring, J. L. Dantzler, John F. Krebs, A. P. Denny and J. Bounds.

The First National Bank of Dewey, I. T., capital \$25,000, has organized with the following officers: Wm. Johnstone, president; George C. Priestley, vice-president; W. A. Letson, cashier.

The National Bank of Commerce of Sulphur, I. T., has been approved; capital \$25,000. The organizers are T. J. Hartman, E. H. Blake, W. T. Gilbert, A. P. Dunlap, C. F. Meaders and others.

The First Trust and Savings Bank of Clarksville, Tenn., has filed its charter; capital \$50,000. The incorporators are Sterling Fort, Carney B. Lyle, J. W. Adams, C. C. Brown and J. J. Garrett.

The Citizens' State Bank of Roosevelt, O. T., capital \$10,000, has been authorized to begin business with the following officers: T. B. Douthitt, president; E. E. Corson, vice-president; L. C. Cheuvior, cashier.

The Independent Hebrew Building and Loan Association has been incorporated at Baltimore, Md., with \$25,000 capital by Israel S. Gomborov, Max Lapides, Max S. Koppelman, Joseph Scheinhart and Fishel Deekelbaum.

The Blaine National Bank of Kilmillerville, Md. (P. O. Blaine, W. Va.), has been organized with \$25,000 capital. The officers are Z. T. Kalbaugh, president; M. P. Fahey, vice-president; Howard C. Dixon, cashier.

The Second National Bank of Towson, Md., capital \$50,000, has been approved. The organizers are E. J. Cook of Towson, Md., and T. W. Offutt, William A. Lee, W. Bernard Duke, Harrison Rider and Allen Stevenson.

The Interstate Finance Co. of Montgomery, Ala., has filed articles of incorporation; capital \$100,000. The incorporators are William V. Hughes, Albert A. Marshall, James S. Pinckard, Massey Wilson and Junius C. Dale.

The Falls Church Bank & Trust Co. of Falls Church, Va., has been granted a charter; capital \$10,000 to \$25,000. The officers are Dr. George B. Fadeley, president; Dr. James B. Gould, vice-president; George W. Hawhurst, secretary and treasurer.

The Bank Depositors' Insurance Company of America has been organized at Alexandria, Va., with from \$100,000 to \$300,000 capital. The officers are E. W. Mankin, president; James F. Peyton, secretary and treasurer, Alexandria, Va., and C. Ernest Colliflower, Washington, D. C.

The Farmers' National Bank of Marietta, I. T., has been organized with \$40,000 capital. The directors are J. D. B-tson, president; Sam Strauss, vice-presi-

dent, and John G. Butler, cashier; Wm. L. Green, Neely T. Alexander, Robert H. Walker, Jas. Y. Taylor and Leo Hughes.

The Cherokee County Bank has been organized at Center, Ala., with the following officers: G. P. Smith, president; J. L. Savage, vice-president; A. O. Williams, cashier; M. B. Wellborn of the First National Bank, Anniston, Ala., chairman of the board of directors. Business is to begin about October 1.

The Bank of Bassett at Bassett, Va., has been organized with \$15,000 capital. The officers are: President, J. D. Bassett; vice-president, C. B. Keesee, and B. C. Philpott, cashier; directors, J. B. Bassett, R. L. Stone, C. C. Bassett, G. J. Penn and S. H. Bassett of Bassett, Va.; C. B. Keesee and J. P. Lewis of Martinsville, Va.

The People's Building Association will, it is reported, begin business at Charles Town, W. Va., about September 1. The incorporators are Myers Palmbaum, John Porterfield, D. S. Hughes, I. W. Williams, C. E. Miley, M. J. Rohr, William Wilt, Frank Nichols, C. L. Crane, C. M. Wiest, O. M. Phillips, F. B. Hooff, C. W. Brown and W. A. Higgs.

The Batesville Building and Savings Association of Batesville, Ark., will, it is said, begin business July 1 with \$100,000 capital. The officers are J. F. Barnett, president; C. F. Cole, vice-president; A. A. Webber, secretary, and Paxton Thomas, treasurer; directors, R. A. Dowdy, A. A. Maxfield, J. E. Rosebrough, Charles Mosby, C. F. Cole, J. F. Barnett, W. P. Jones, D. D. Adams and W. F. Ball.

The Bank of Meadville at Meadville, Miss., has elected the following directors: F. W. Foote, M. G. Bradley, W. F. Byrd, W. H. Hardy, Jr., cashier; D. R. McGehee, H. G. Butler and T. K. Magee. W. H. Hardy, Jr., W. T. Byrd and M. G. Bradley were elected to serve as a committee in place of president and vice-president until a meeting of the directors and stockholders in January. It is stated that business will begin as soon as building is obtained.

The Farmers and Merchants' State Bank of Fredericksburg, Va., has begun business in the Willis Building with \$50,000 capital. The directors are M. G. Willis, president; Lee J. Graves, first vice-president; E. D. Cole, second vice-president; John F. Gouldman, Jr., cashier; David Hirsh, W. S. Chesley, E. W. Mills, S. G. Wallace, A. P. Rowe, E. G. Heflin, M. F. Waite, F. P. Stearns, B. P. Willis, E. C. Ninde and Dr. George H. Cheyning. D. Gordon Gouldman is assistant cashier.

The Commercial Bank & Trust Co. of Dallas, Texas, will, it is announced, begin business about July 2 with \$150,000 capital. The following officers have been elected: President, Royal A. Ferris; first vice-president, H. C. Coke; second vice-president, George N. Aldredge; cashier, F. H. Blankenship; directors, George N. Aldredge, L. Blaylock, Sam P. Cochran, Henry C. Coke, W. C. Connor, E. H. R. Green, T. S. Miller, S. I. Munger, G. W. Owens, John N. Simpson, R. H. Stewart, J. D. Sugg, W. H. Thomas, L. S. Thorne, W. J. Townsend, Paul Waples, W. B. Worsham, B. F. Yoakum, Royal A. Ferris, J. B. Wilson, E. M. Reardon, C. C. Slaughter, E. J. Gannon and A. V. Lane.

New Securities.

Alba, Mo.—An issue of \$7000 of 5 per cent. Alba school district bonds have been registered by the State auditor.

Bluefield, W. Va.—The Bluefield Brewing Co. gives notice that a meeting of stockholders will be held July 2 to decide the question of issuing \$150,000 of bonds. John Husband is president.

Campbell, Mo.—The William R. Compton Bond & Mortgage Co. of Macon, Mo.,

has purchased at par the \$6000 of 5 per cent. city hall bonds.

Christiansburg, Va.—Montgomery county is reported to have recently purchased at par the \$8000 of 4½ per cent. 10-year Christiansburg School District No. 4 bonds.

Chattanooga, Tenn.—Press reports state that the city is considering an issue of about \$800,000 of city hall, street and sewer bonds.

Crowell, Texas.—An issue of \$6600 of 5 per cent. 20-40-year school bonds has been approved and registered.

Dayton, Ky.—An ordinance has been passed by the city council providing for an issue of \$25,000 of 4 per cent. refunding street-improvement bonds.

Easton, Md.—Mr. William Law of Easton has been awarded at a premium of \$101 the \$10,000 of 4 per cent. 10½-year Talbot county school bonds.

Eaton, Ga.—An election is to be held July 18 to vote on the proposed issue of \$150,000 of 6 per cent. sewer bonds.

Gadsden, Ala.—The city has voted to issue \$15,000 of 5 per cent. 30-year school bonds.

Greenwood, Miss.—The Robinson-Humphrey Company of Atlanta has been awarded at a premium of \$1225 the \$30,000 of 5 per cent. improvement bonds.

Huntsville, Texas.—Bids will be received by G. A. Wynne, city treasurer and cashier Gibbs National Bank, until 4 P. M., July 17, for \$15,000 of 4½ per cent. 10-40-year schoolhouse bonds, and \$10,500 of 4½ per cent. 10-30-year refunding water bonds.

Jacksonville, Fla.—The board of commissioners of Duval county has been asked, it is reported, to approve an issue of \$2,000,000 of improvement bonds.

Johnson City, Tenn.—Bids will be received by W. I. Hart, chairman of finance committee, until 7 P. M. July 19 for \$17,500 of 5 per cent. 20-year school-building bonds.

Joplin, Mo.—The Joplin National Bank has been awarded at par the \$45,000 of 4 per cent. 10-20-year building bonds.

Kentwood, La.—Bids will be received by J. P. Chambers, mayor, and the board of aldermen until 8 P. M. July 16 for \$35,000 of 5 per cent. improvement bonds.

Lamesa, Texas.—An issue of \$5000 of 5 per cent. 5-20-year Dawson county courthouse and jail bonds was recently registered.

Leesburg, Va.—The \$25,000 of water-works bonds have been purchased at a premium by W. N. Harris & Co. of New York.

Lumpkin, Texas.—The bonds to be voted on July 2 are \$10,000 of school and \$5000 of electric-light 5 per cent. bonds.

Macon, Ga.—The election to vote on the question of issuing \$100,000 of paying bonds is to be held July 24.

Malone, Texas.—The city has voted to issue \$7000 of school-building bonds.

Marietta, Ga.—The election to vote on the question of issuing \$10,000 of school bonds failed to carry.

Mill Creek, I. T.—The city has voted to issue \$10,000 of 20-year school-building bonds.

Mobile, Ala.—The \$200,000 of Mobile county jail and courthouse bonds have been awarded the Bank of Mobile at a premium of \$4062.50.

Morgantown, W. Va.—The election to vote on the issue of \$80,000 of 5 per cent. 5-20-year bridge bonds failed to carry.

Newport, Ky.—Messrs. Weil, Roth & Co. of Cincinnati have been awarded at a premium of \$1700 the \$55,000 of 4 per cent. 20-year refunding bonds.

Okolona, Miss.—The Chuquatoucha drainage commissioners will, it is reported, issue drainage bonds. Messrs. Gilleylen & Leftwich of Aberdeen and L. P. Haley

of Okolona are attorneys for the commissioners.

Prentiss, Miss.—An issue of \$50,000 of courthouse and jail bonds has been authorized by the board of supervisors.

Roscoe, Texas.—The \$6000 of 5 per cent. 20-year school-building bonds are now being offered for sale.

Stigler, I. T.—Mr. R. J. Edwards of Oklahoma City is reported to have purchased at 102 the \$12,000 of 6 per cent. 20-year school-building bonds.

Tioga, Texas.—Bids will be received by Matt Bradley, secretary board of trustees, until 6 P. M. July 2, for \$12,000 of 5 per cent. 5-40-year school bonds.

Tulsa, I. T.—The directors of the Tulsa Water, Light & Power Co. have voted to issue \$300,000 of bonds for rebuilding the local water system.

Uniontown, Ala.—Ordinances have been passed by the city council authorizing the issue of \$35,000 30-year refunding and \$10,000 of 20-30-year street-improvement 5 per cent. bonds.

Waelder, Texas.—The city has voted to issue \$8000 of school bonds.

Wanette, O. T.—Messrs. John Nuveen & Co. of Chicago are reported to have purchased the \$20,000 of 6 per cent. 30-year water bonds.

Whitesboro, Texas.—An issue of \$12,000 of 5 per cent. 10-40-year water-works bonds has been approved and registered.

Williston, N. C.—Bids will be received by D. C. Page, city auditor, until 8 P. M. June 28 for \$15,000 of electric-light and \$12,000 of water-works 6 per cent. bonds.

Yazoo City, Miss.—Bids will be received until 7.30 P. M. July 9 by E. J. Poursine, city clerk, for \$50,000 of electric street-railway bonds.

At Columbus, Miss., bids will be received until July 24 for \$60,000 of 5 per cent. 20-year general improvement bonds. J. T. Gunter is mayor. *Further particulars will be found in the advertising columns.*

At Greenville, Ala., bids will be received by J. J. McMullan, mayor, until 4 P. M. July 16 for \$30,000 of 5 per cent. sewer and street-improvement bonds. *Further particulars will be found in the advertising columns.*

At West Point, Miss., bids will be received at the office of the mayor until 8 P. M. July 10 for \$30,000 of 5 per cent. 30-year school-building bonds. J. R. Brinker is city clerk. *Further particulars will be found in the advertising columns.*

Financial Notes.

The Fourth National Bank of Atlanta, Ga., has, it is reported, established a savings department.

The Farmers and Merchants' Bank of Radford, Va., will, it is reported, increase its capital \$10,000.

Georgia bankers are reported to be endeavoring to secure the establishment of a subtreasury at Atlanta.

The Home & Savings Fund Co. Building Association of Louisville, Ky., is reported to have amended its charter, increasing its capital from \$5,000,000 to \$6,000,000.

A meeting of stockholders of the Birmingham Title & Guaranty Co. is to be held at Birmingham, Ala., July 24 to consider the question of increasing the capital from \$100,000 to \$150,000. Lee C. Bradley is president and J. K. Brockman, secretary.

"Law's Reference Book of Southern Cotton-Mill Stocks" is a convenient little publication issued by A. M. Law & Co., dealers in stocks and bonds, Spartanburg, S. C. It is dated June, 1906, and contains the salient facts concerning a large number of Southern mills.

The Fuller Combing Gin Co. of Charlotte, N. C., is offering for subscription

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\$40,000 of 7 per cent. preferred cumulative stock at par, \$100, with a bonus of one-half share of common stock to each share of preferred. This is an unsold balance of the entire issue of preferred stock, which amounts to \$100,000. The common stock is \$300,000. Headquarters are at Charlotte, N. C., and James T. Fuller is president; Charles F. Wadsworth, vice-president, and J. J. Farnan, secretary-treasurer.

